

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase Product code : 14285152

Frame	: 286T	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>2</sup>	: 225 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.3381 kgm <sup>2</sup>
Design	: B		

Output [HP]	20	20	20	20
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	48.4/24.2	28.9	27.9	27.2
L. R. Amperes [A]	348/174	173	184	193
LRC [A]	7.2x(Code H)	6.0x(Code F)	6.6x(Code G)	7.1x(Code H)
No load current [A]	17.6/8.80	8.30	9.00	9.60
Rated speed [RPM]	1175	970	975	975
Slip [%]	2.08	3.00	2.50	2.50
Rated torque [kgfm]	12.4	15.0	14.9	14.9
Locked rotor torque [%]	250	190	220	240
Breakdown torque [%]	270	210	240	260
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	39s (cold) 22s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level <sup>2</sup>	59.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%			
	50%	91.7	90.2	89.5
	75%	91.7	91.0	91.0
	100%	91.7	89.5	90.2
Power Factor	25%			
	50%	0.70	0.76	0.70
	75%	0.80	0.84	0.80
	100%	0.85	0.88	0.85

Bearing type	: Drive end	6311	Non drive end	6211	Foundation loads	Max. traction	: 441 kgf
	: 2RS C3		: 2RS C3				
Sealing	: Oil Seal		: Lip Seal		Max. compression	: 666 kgf	
Lubrication interval	: -		: -				
Lubricant amount	: -		: -				
Lubricant type	: Mobil Polyrex EM						

Notes  
USABLE @208V 53.5A SF 1.15 SFA 61.5A

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	Date
Performed by				
Checked by			Page	Revision
Date	10/09/2022		1 / 6	

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	10/09/2022		2 / 6	

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

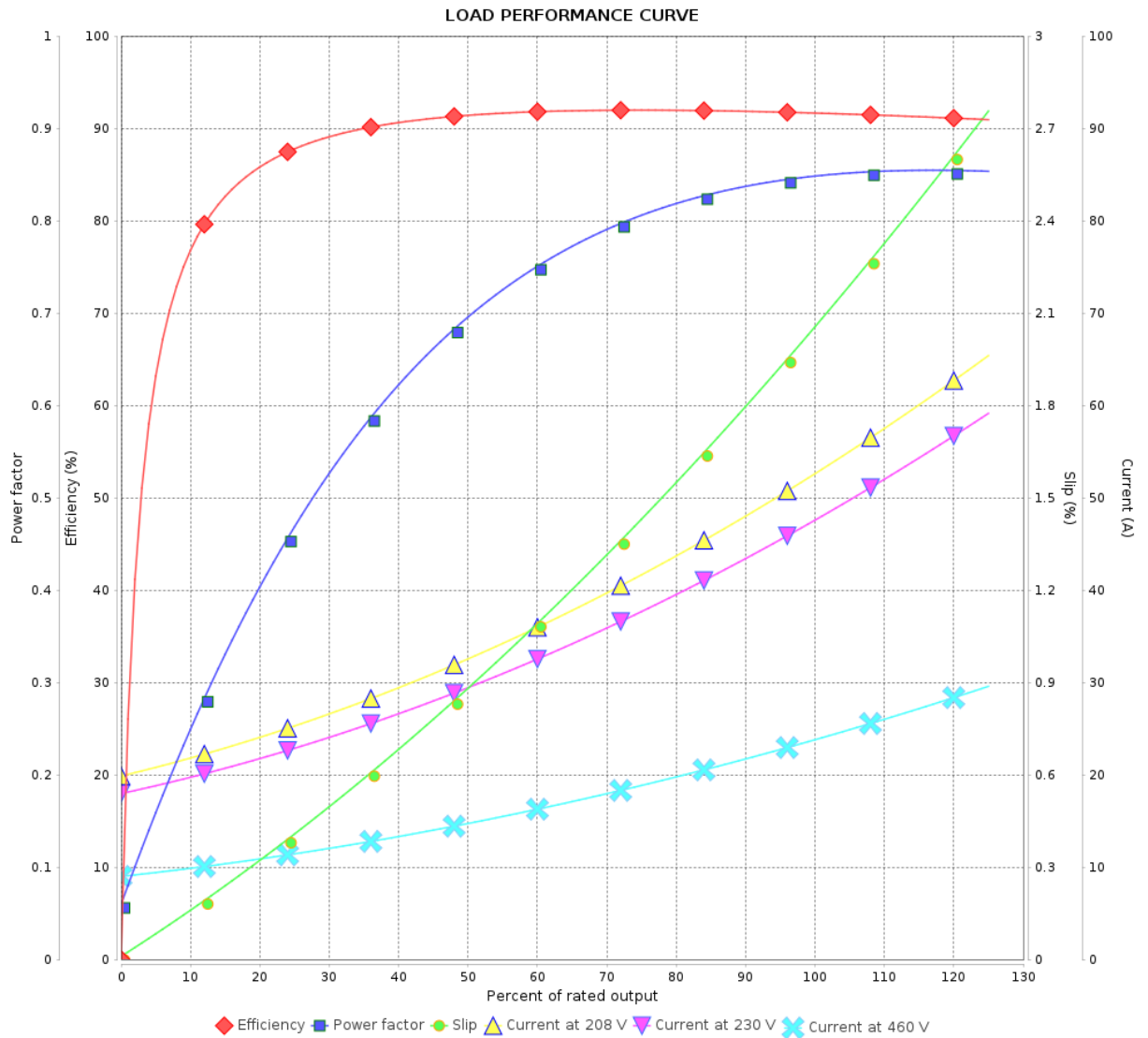


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code :

14285152



Performance : 230/460 V 60 Hz 6P

Rated current : 48.4/24.2 A  
 LRC : 7.2  
 Rated torque : 12.4 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 270 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 0.3381 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	Revision
Checked by				
Date				

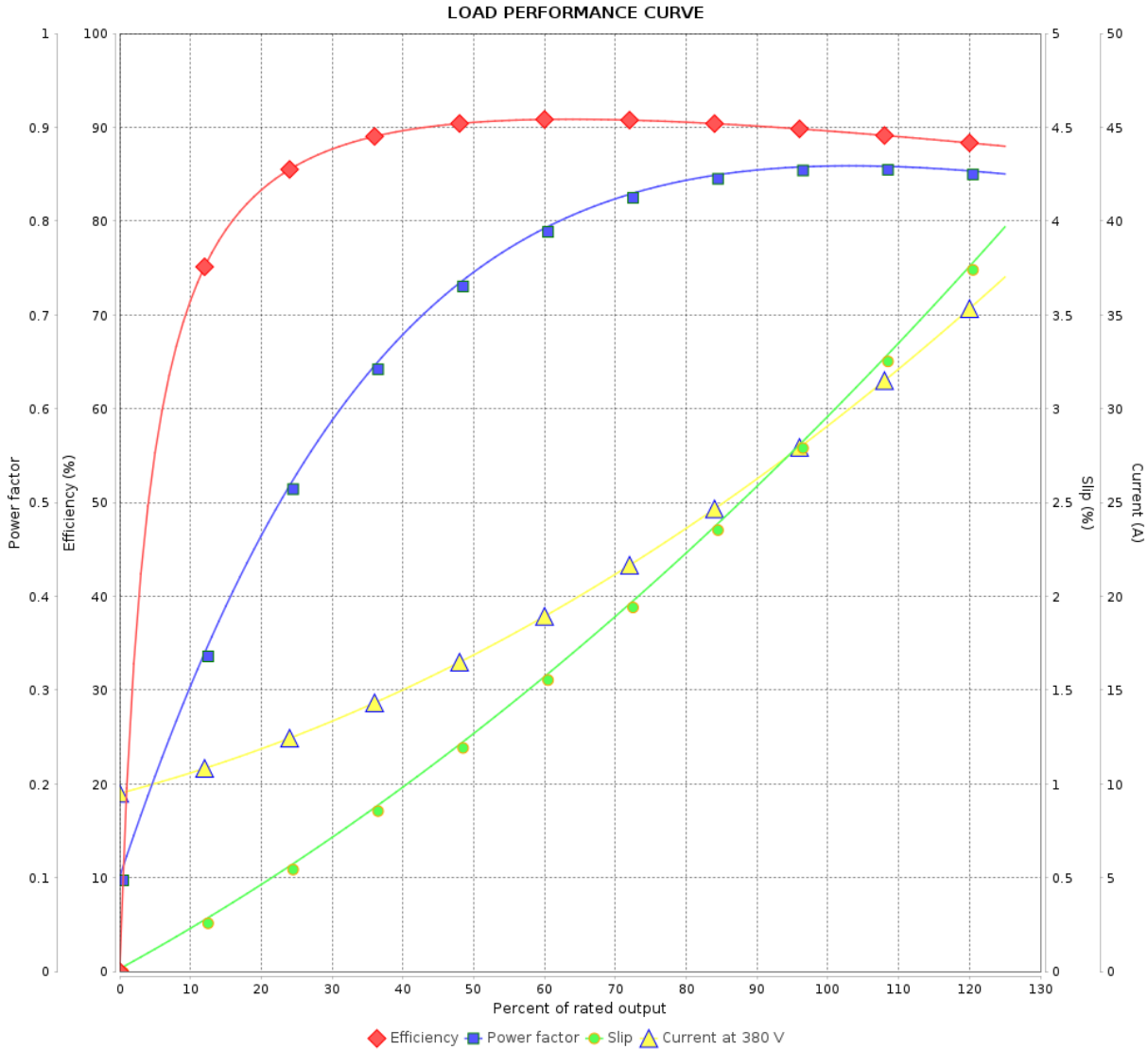
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 14285152



Performance : 380 V 50 Hz 6P IE1

Rated current	: 28.9 A	Moment of inertia (J)	: 0.3381 kgm <sup>2</sup>
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 15.0 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 6	Revision
Checked by				
Date	10/09/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

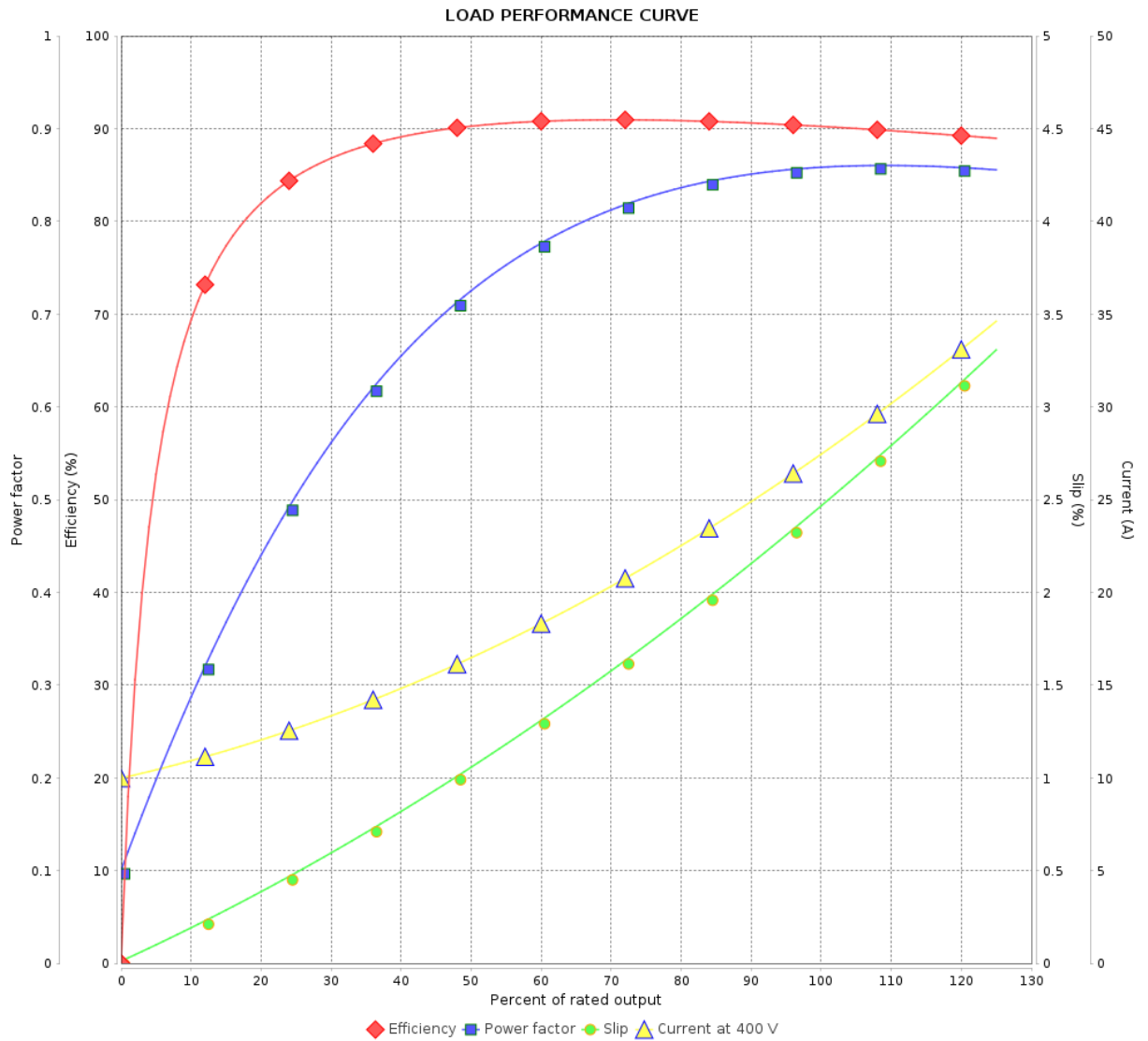


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code :

14285152



Performance : 400 V 50 Hz 6P IE2

Rated current : 27.9 A  
 LRC : 6.6  
 Rated torque : 14.9 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 975 rpm

Moment of inertia (J) : 0.3381 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		5 / 6		

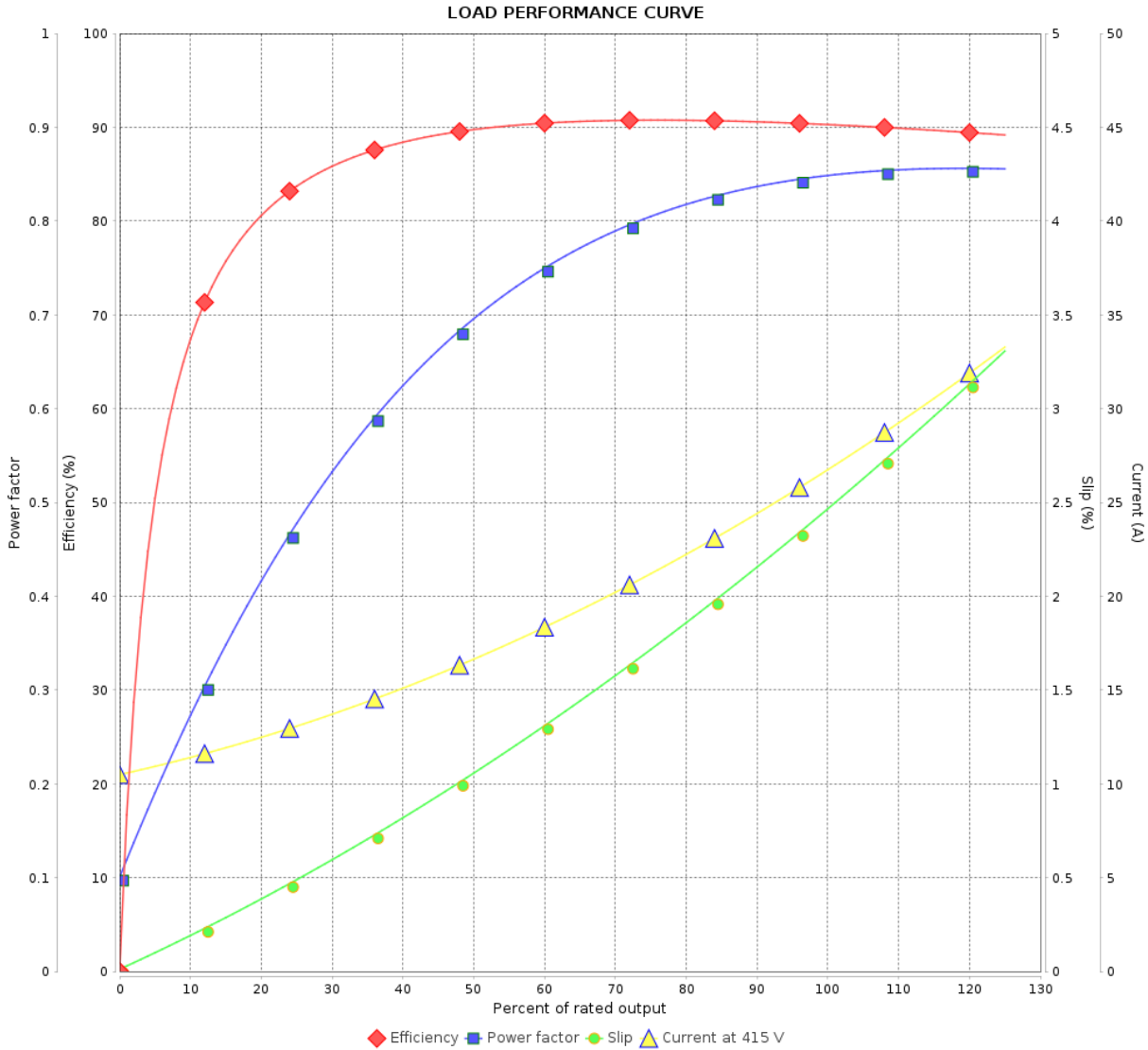
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase      Product code : 14285152



Performance : 415 V 50 Hz 6P IE2

Rated current	: 27.2 A	Moment of inertia (J)	: 0.3381 kgm <sup>2</sup>
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 14.9 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 6	Revision
Checked by				
Date	10/09/2022			