### **DATA SHEET**

#### Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Rolled Steel Premium Efficiency Three- Product code : 14797786

Phase

Frame : 56C Cooling method : IC411 - TEFC Insulation class : F Mounting : F-1

Duty cycle : Cont.(S1) Rotation¹ : Both (CW and CCW)
Ambient temperature : -20°C to +40°C Starting method : Direct On Line

Altitude : 1000 m.a.s.l. Approx. weight³ : 17.1 kg
Protection degree : IP55 Moment of inertia (J) : 0.0052 kgm²

Design : B Output [HP] 1 1 1 Poles 4 4 4 Frequency [Hz] 60 50 50 Rated voltage [V] 230/460 190-220/380 415 Rated current [A] 2.94/1.47 3.40-2.94/1.70 1.62 L. R. Amperes [A] 25.3/12.6 22.1-19.1/11.0 12.2 LRC [A] 8.6x(Code M) 6.5x(Code J) 7.5x(Code K) No load current [A] 1.78/0.890 1.76-1.52/0.879 0.988 Rated speed [RPM] 1765 1450 1460 Slip [%] 1.94 3.33 2.67 Rated torque [kgfm] 0.411 0.501 0.497 Locked rotor torque [%] 280 200 250 Breakdown torque [%] 300 270 330 Service factor 1.00 1.00 80 K 80 K 80 K Temperature rise Locked rotor time 34s (cold) 19s (hot) 32s (cold) 18s (hot) 28s (cold) 16s (hot) Noise level<sup>2</sup> 52.0 dB(A) 49.0 dB(A) 49.0 dB(A) 25% 81.0 82.5 80.4 50% 82.5 82.2 80.9 Efficiency (%) 75% 84.0 83.7 83.5 100% 85.5 82.9 83.7 25% 0.36 0.30 0.31 50% 0.52 0.55 0.62 Power Factor 75% 0.66 0.74 0.68

<u>Drive end</u> <u>Non drive end</u> Foundation loads

0.75

Bearing type : 6204 ZZ 6202 ZZ Max. traction : 44 kgf Sealing : V'Ring Without Max. compression : 61 kgf

Bearing Seal

Lubrication interval : - - Lubricant amount : - Lubricant type : Mobil Polyrex EM

Notes

USABLE @208V 3.25A SF 1.00 SFA 3.25A

100%

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.

0.81

0.77

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### TORQUE AND CURRENT VS SPEED CURVE

#### Three Phase Induction Motor - Squirrel Cage

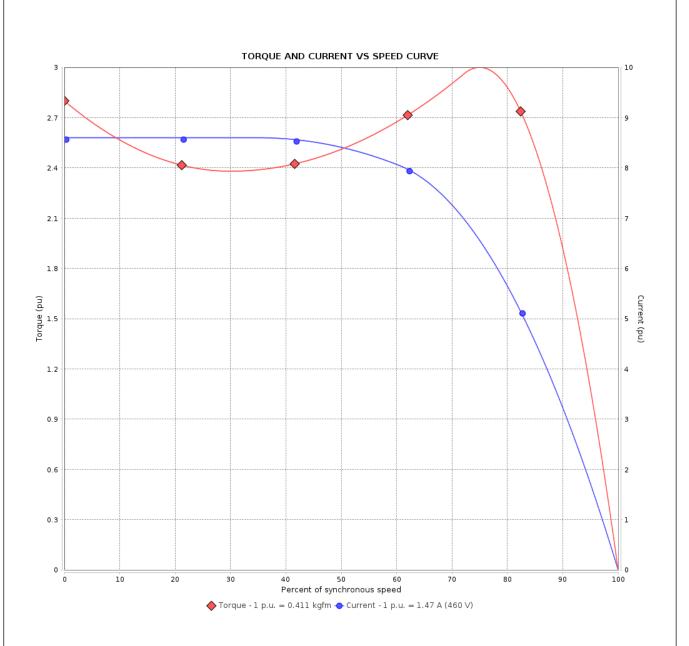


Customer :

Product line : Rolled Steel Premium Efficiency Three-

Product code:

14797786



Performance : 230/460 V 60 Hz 4P Rated current : 2.94/1.47 A Moment of inertia (J) : 0.0052 kgm<sup>2</sup> **LRC** Duty cycle : Cont.(S1) : F Insulation class Rated torque : 0.411 kgfm : 280 % Service factor Locked rotor torque Breakdown torque : 300 % Temperature rise : 80 K Rated speed : 1765 rpm Design : B

Locked rotor time : 34s (cold) 19s (hot)

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## TORQUE AND CURRENT VS SPEED CURVE

### Three Phase Induction Motor - Squirrel Cage

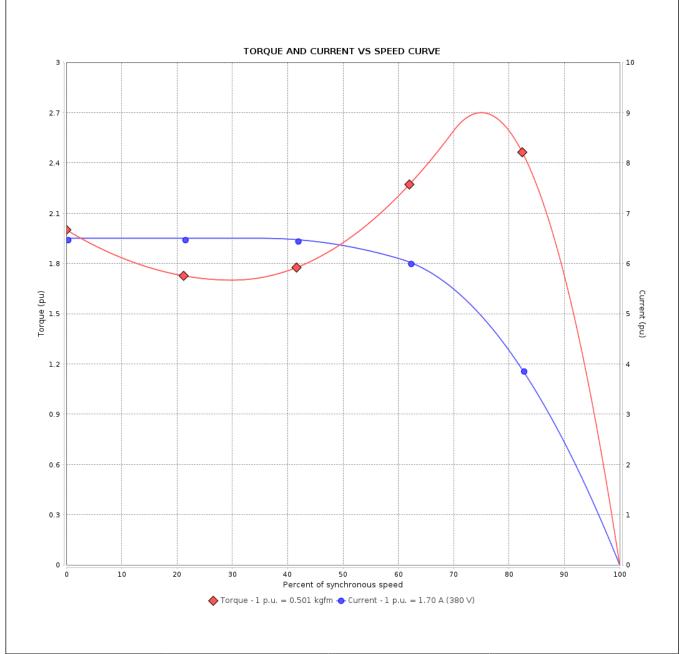


Customer :

Product line : Rolled Steel Premium Efficiency Three-

Product code:

14797786



Performance	: 190-220/380 V 50 Hz 4P		
Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed	: 3.40-2.94/1.70 A : 6.5 : 0.501 kgfm : 200 % : 270 % : 1450 rpm	Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design	: 0.0052 kgm <sup>2</sup> : Cont.(S1) : F : 1.00 : 80 K : B
Locked rotor time	: 32s (cold) 18s (hot)	110	

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### TORQUE AND CURRENT VS SPEED CURVE

#### Three Phase Induction Motor - Squirrel Cage

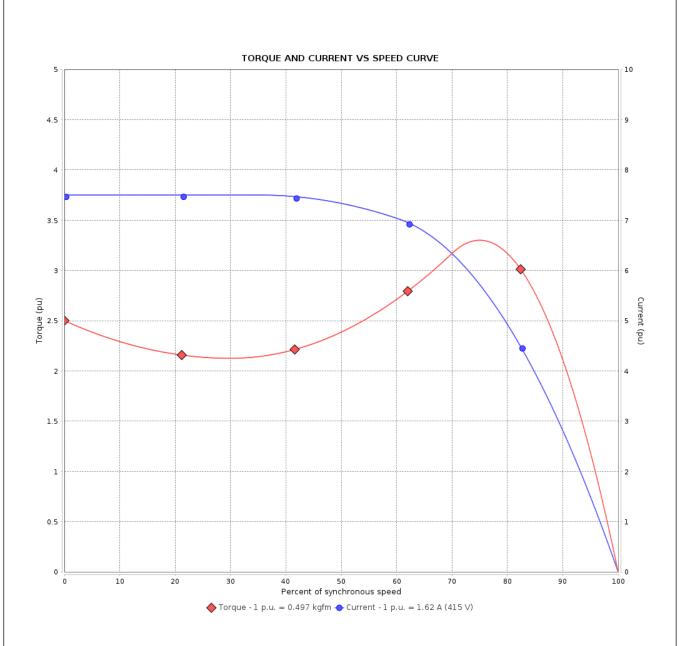


Customer :

Product line : Rolled Steel Premium Efficiency Three-

Product code:

14797786



Performance : 415 V 50 Hz 4P Rated current : 1.62 A Moment of inertia (J) : 0.0052 kgm<sup>2</sup> **LRC** : 7.5 Duty cycle : Cont.(S1) : F Rated torque : 0.497 kgfm Insulation class : 250 % Service factor Locked rotor torque : 1.00 Breakdown torque : 330 % Temperature rise : 80 K Rated speed : B : 1460 rpm Design

Locked rotor time : 28s (cold) 16s (hot)

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# LOAD PERFORMANCE CURVE

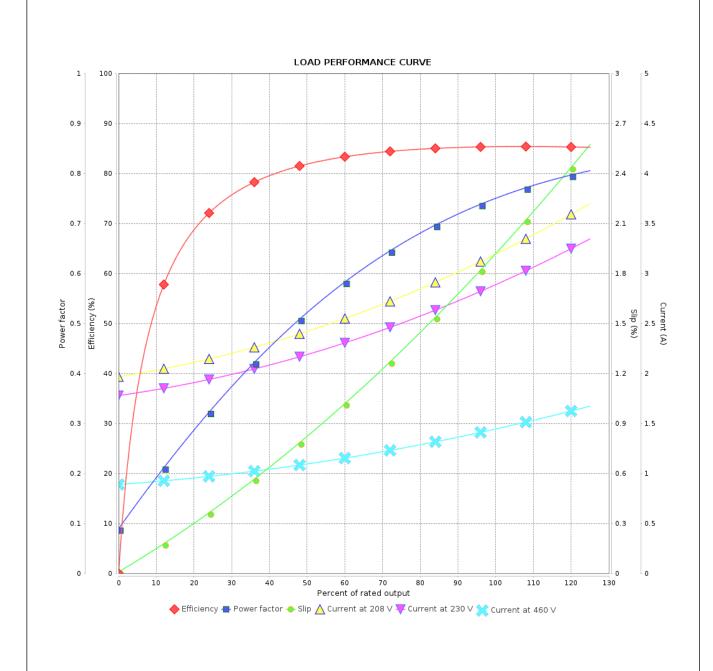
### Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Rolled Steel Premium Efficiency Three- Product code : 14797786

Phase



Performance	: 2	30/460 V 60 Hz 4P				
Rated current LRC Rated torque Locked rotor torq Breakdown torqu	: 8 : 0 ue : 2	94/1.47 A .6 .411 kgfm 80 % 00 %	Moment of Duty cycle Insulation Service fa	class actor	: 0.0052 kgm <sup>2</sup> : Cont.(S1) : F :	•
•		765 rpm	Design		: B	
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## LOAD PERFORMANCE CURVE

### Three Phase Induction Motor - Squirrel Cage



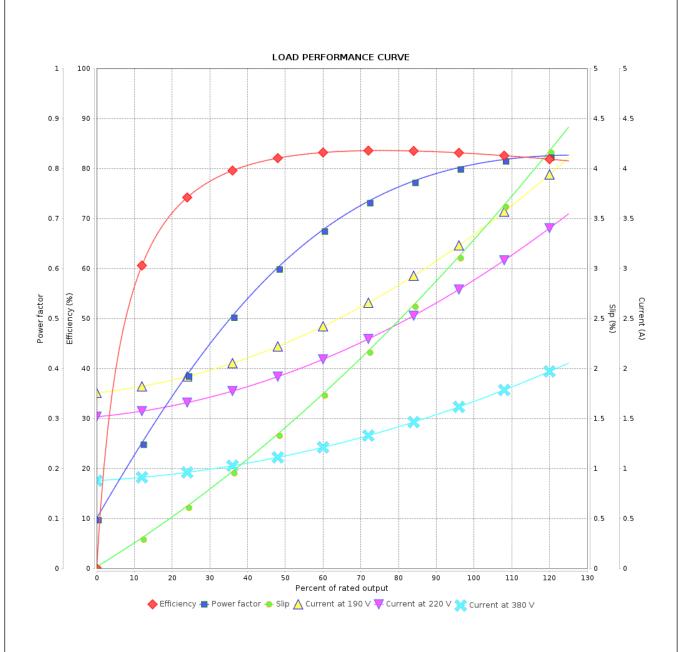
Customer :

Product line : Rolled Steel Premium Efficiency Three-

Product code:

14797786

Phase



Performance	: 1	90-220/380 V 50 Hz 4	P			
Rated current LRC Rated torque Locked rotor torq Breakdown torqu	: 3 : 6 : 0 ue : 2	.40-2.94/1.70 A	Moment of Duty cycle Insulation Service fa	class actor	: 0.0052 kgm <sup>2</sup> : Cont.(S1) : F : 1.00 : 80 K	2
Rated speed	•		ure rise	: B		
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# LOAD PERFORMANCE CURVE

### Three Phase Induction Motor - Squirrel Cage



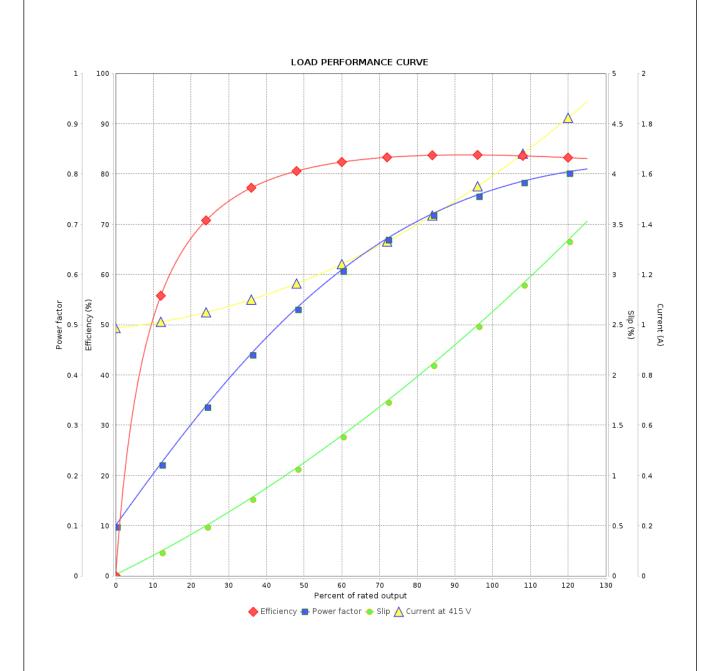
Customer :

Product line : Rolled Steel Premium Efficiency Three- Product code : 14797786

Phase

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Date



Performance	: 415 V 50 Hz 4P				
Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed	: 1.62 A : 7.5 : 0.497 kgfm : 250 % : 330 % : 1460 rpm	Moment of Duty cycle Insulation of Service fact Temperatur Design	lass tor	: 0.0052 kgm² : Cont.(S1) : F : 1.00 : 80 K : B	
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## THERMAL LIMIT CURVE

### Three Phase Induction Motor - Squirrel Cage

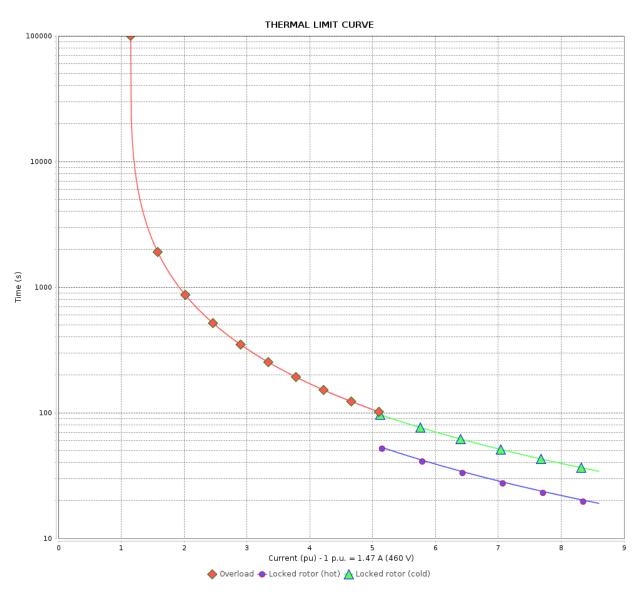


Customer :

Product line : Rolled Steel Premium Efficiency Three-

Phase

Product code: 14797786



Performance : 230/460 V 60 Hz 4P : 2.94/1.47 A Moment of inertia (J) : 0.0052 kgm<sup>2</sup> Rated current **LRC** Duty cycle : Cont.(S1) : 8.6 Insulation class Rated torque : 0.411 kgfm : F : 280 % Locked rotor torque Service factor : 300 % : 80 K Breakdown torque Temperature rise : B Rated speed : 1765 rpm Design Heating constant Cooling constant

## THERMAL LIMIT CURVE

#### Three Phase Induction Motor - Squirrel Cage

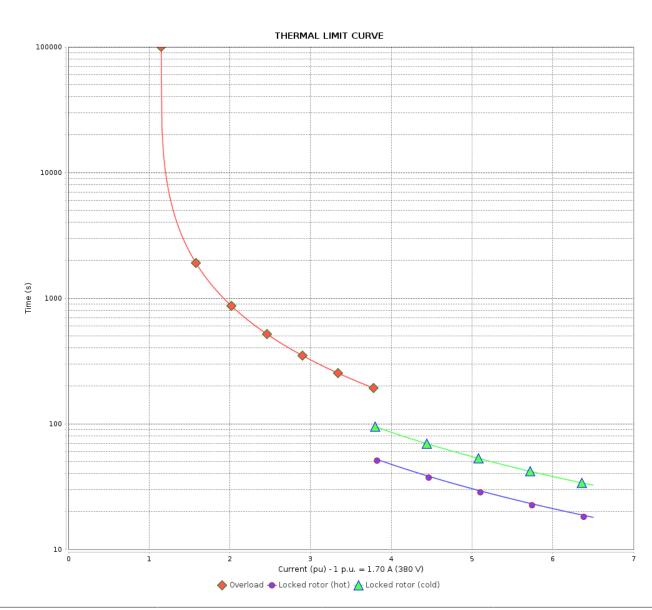


Customer :

Product line : Rolled Steel Premium Efficiency Three-

Product code:

14797786



: 190-220/380 V 50 Hz 4P Performance : 3.40-2.94/1.70 A Moment of inertia (J) : 0.0052 kgm<sup>2</sup> Rated current **LRC** Duty cycle : Cont.(S1) : 6.5 Insulation class Rated torque : 0.501 kgfm : F Locked rotor torque : 200 % Service factor : 1.00 : 270 % : 80 K Breakdown torque Temperature rise Rated speed : 1450 rpm Design : B Heating constant

Cooling constant					
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## THERMAL LIMIT CURVE

#### Three Phase Induction Motor - Squirrel Cage

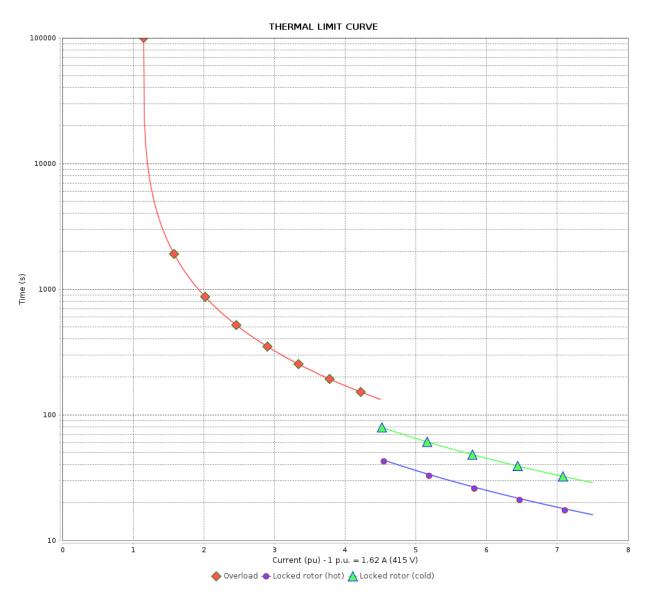


Customer	

Product line : Rolled Steel Premium Efficiency Three-

Phase

Product code: 14797786



Performance : 415 V 50 Hz 4P : 1.62 A Moment of inertia (J) : 0.0052 kgm<sup>2</sup> Rated current **LRC** Duty cycle : Cont.(S1) : 7.5 : 0.497 kgfm Insulation class : F Rated torque Locked rotor torque : 250 % Service factor : 1.00 : 330 % : 80 K Breakdown torque Temperature rise Rated speed : 1460 rpm Design : B Heating constant

 Cooling constant

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# VFD OPERATION CURVE

### Three Phase Induction Motor - Squirrel Cage



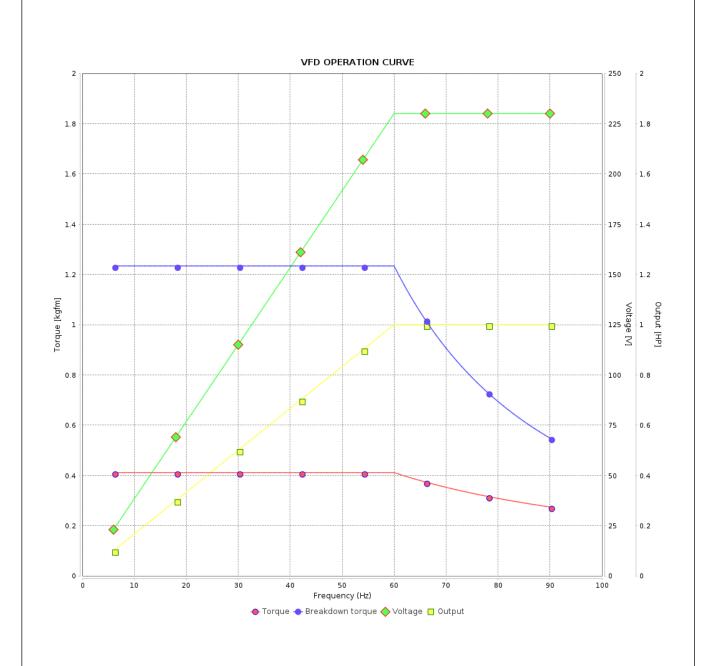
Customer :

Product line : Rolled Steel Premium Efficiency Three- Product code : 14797786

Phase

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Date



Performance	: 23	30/460 V 60 Hz 4P				
Rated current LRC Rated torque Locked rotor torq Breakdown torqu Rated speed	: 8. : 0. ue : 28 e : 30	94/1.47 A 6 411 kgfm 30 % 00 % 765 rpm	Moment of Duty cycle Insulation Service fa Temperatu Design	class ctor	: 0.0052 kgm² : Cont.(S1) : F : : 80 K : B	
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# VFD OPERATION CURVE

### Three Phase Induction Motor - Squirrel Cage



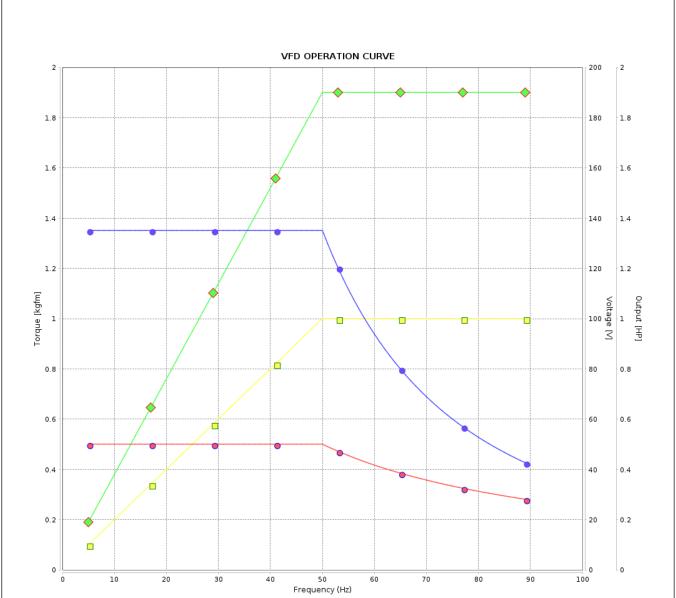
Customer :

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Performance	: 190-220/380 V 50 Hz 4P						
Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed	: 3.40-2.94/1.70 A : 6.5 : 0.501 kgfm : 200 % : 270 % : 1450 rpm	Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design		: 0.0052 kgm <sup>2</sup> : Cont.(S1) : F : 1.00 : 80 K : B	2		
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🔷 Torque 🔷 Breakdown torque 🔷 Voltage 📙 Output

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# VFD OPERATION CURVE

### Three Phase Induction Motor - Squirrel Cage



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Customer :

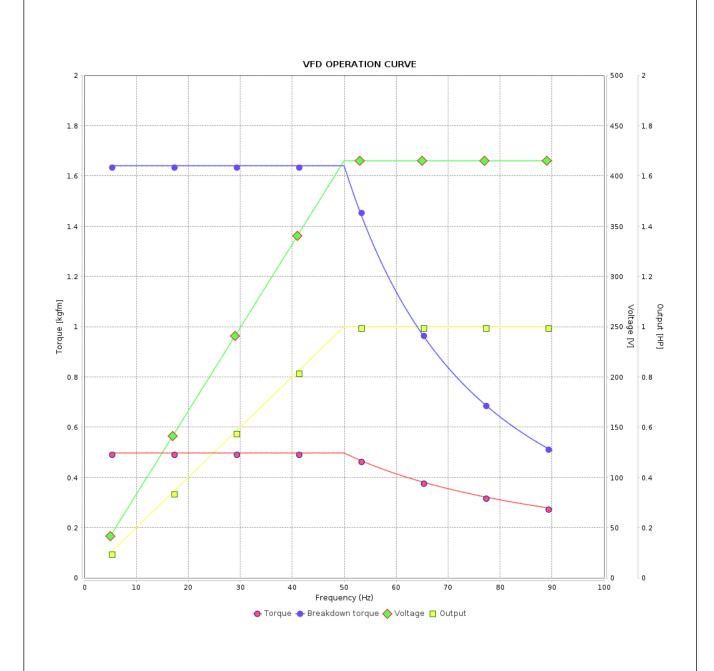
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Date

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Product line : Rolled Steel Premium Efficiency Three- Product code :

Phase



Performance	: 415 V 50 Hz 4P				
Rated current	: 1.62 A	Moment of inertia (J)		: 0.0052 kgm²	
LRC	: 7.5	Duty cycle		: Cont.(S1)	
Rated torque	: 0.497 kgfm	Insulation class		: F	
Locked rotor torque	: 250 %	Service factor		: 1.00	
Breakdown torque	: 330 %	Temperature rise		: 80 K	
Rated speed	: 1460 rpm	Design		: B	
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