### **DATA SHEET**

#### Three Phase Induction Motor - Squirrel Cage



Customer Product line : NEMA Premium Efficiency Three-Product code: 12700708 Catalog #: 03018ET3E286T-W22G Frame : 284/6T Cooling method : IC411 - TEFC Insulation class 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 : 1000 m.a.s.l. Approx. weight3 : 445 lb Altitude : IP55 Protection degree Moment of inertia (J) Design : B Output [HP] 30 30 Poles 4 Frequency [Hz] 60 50 Rated voltage [V] 208-230/460 380 Rated current [A] 77.6-70.2/35.1 43.1 L. R. Amperes [A] 473-428/214 216 LRC [A] 6.1x(Code G) 5.0x(Code E) No load current [A] 22.4-26.0/13.0 12.9 Rated speed [RPM] 1765 1445 Slip [%] 1.94 3.67 Rated torque [ft.lb] 89.3 109 Locked rotor torque [%] 240 170 Breakdown torque [%] 240 190 Service factor 1.25 1.00 Temperature rise 80 K 80 K Locked rotor time 36s (cold) 20s (hot) 27s (cold) 15s (hot) Noise level<sup>2</sup> 64.0 dB(A) 61.0 dB(A) 25% 0.000 0.000 50% 93.0 90.0 Efficiency (%) 75% 93.0 90.2 100% 93.6 90.2 25% 0.00 0.00 50% 0.70 0.76 Power Factor 75% 0.80 0.83 100% 0.84 0.86 Drive end Non drive end Foundation loads Bearing type 6211 C3 6311 C3 Max. traction : 680 lb Sealing V'Ring V'Ring Max. compression : 1126 lb 20000 h Lubrication interval 20000 h Lubricant amount 18 g 11 g Mobil Polyrex EM Lubricant type Notes

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	14/04/2022			1 / 11	

### TORQUE AND CURRENT VS SPEED CURVE

#### Three Phase Induction Motor - Squirrel Cage

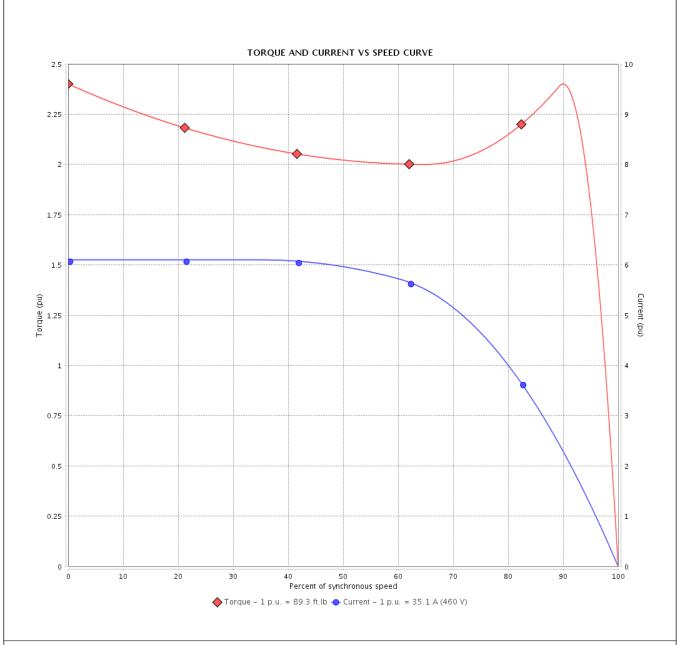


Customer

Product line : NEMA Premium Efficiency Three-

Product code: 12700708

Catalog #: 03018ET3E286T-W22G



Performance : 208-230/460 V 60 Hz 4P

Rated current : 77.6-70.2/35.1 A

Moment of inertia (J) **LRC** : 6.1 Duty cycle

: Cont.(S1) : 89.3 ft.lb Insulation class Rated torque : F Service factor Locked rotor torque : 240 % : 1.25 Breakdown torque : 240 % Temperature rise : 80 K Rated speed : 1765 rpm Design : B

Locked rotor time : 36s (cold) 20s (hot)

Rev.		Changes Summary	Performed	Checked	Date
Performed by					
Checked by				Page	Revision
Date	14/04/2022			2/11	

### TORQUE AND CURRENT VS SPEED CURVE



Revision

Page

3/11

Three Phase Induction Motor - Squirrel Cage Customer Product line : NEMA Premium Efficiency Three-Product code: 12700708 Catalog #: 03018ET3E286T-W22G TORQUE AND CURRENT VS SPEED CURVE 1.8 1.4 1.2 Current Torque (pu) 0.8 0.4 0.2 Percent of synchronous speed ◆ Torque - 1 p.u. = 109 ft.lb ◆ Current - 1 p.u. = 43.1 A (380 V) Performance : 380 V 50 Hz 4P Rated current : 43.1 A Moment of inertia (J) **LRC** : 5.0 Duty cycle : Cont.(S1) : 109 ft.lb Insulation class : F Rated torque Locked rotor torque : 170 % Service factor : 1.00 : 190 % Breakdown torque Temperature rise : 80 K Rated speed : 1445 rpm Design : B Locked rotor time : 27s (cold) 15s (hot) Date Performed Checked Rev. **Changes Summary** 

Performed by Checked by

Date

14/04/2022

### LOAD PERFORMANCE CURVE

#### Three Phase Induction Motor - Squirrel Cage



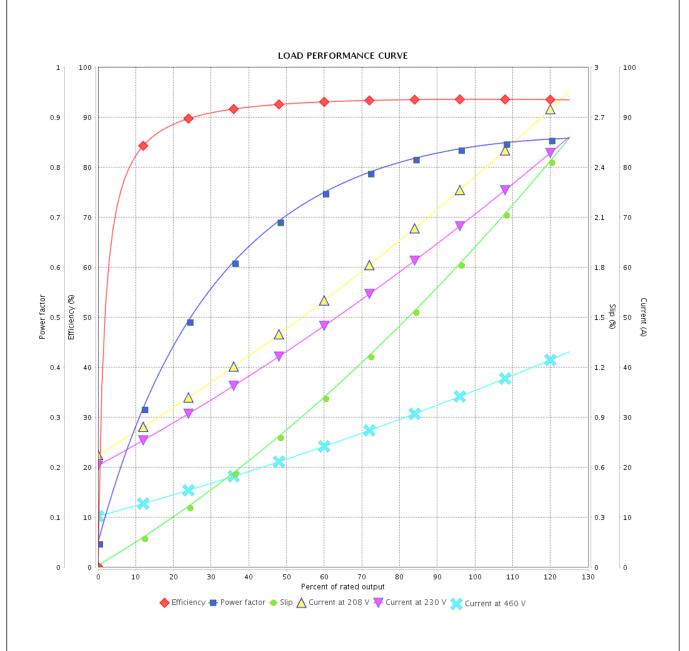
Customer :

Product line : NEMA Premium Efficiency Three- Product

Phase

Product code: 12700708

Catalog #: 03018ET3E286T-W22G



Performance	: 2	208-230/460 V 60 Hz	4P			
Rated current	: 7	7.6-70.2/35.1 A	Moment of	of inertia (J)		
LRC	: 6	5.1	Duty cycle	e ` ´	: Cont.(S1)	
Rated torque	: 8	39.3 ft.lb	Insulation	class	: F	
Locked rotor torqu	ue : 2	240 %	Service fa	actor	: 1.25	
Breakdown torque	e : 2	240 %	Temperat	ure rise	: 80 K	
Rated speed	: 1	1765 rpm	Design		: B	
Rev.		Changes Summary	 	Performed	Checked	Date
Performed by						
Checked by		1			Page	Revision
Date	14/04/2022				4 / 11	

## LOAD PERFORMANCE CURVE

#### Three Phase Induction Motor - Squirrel Cage



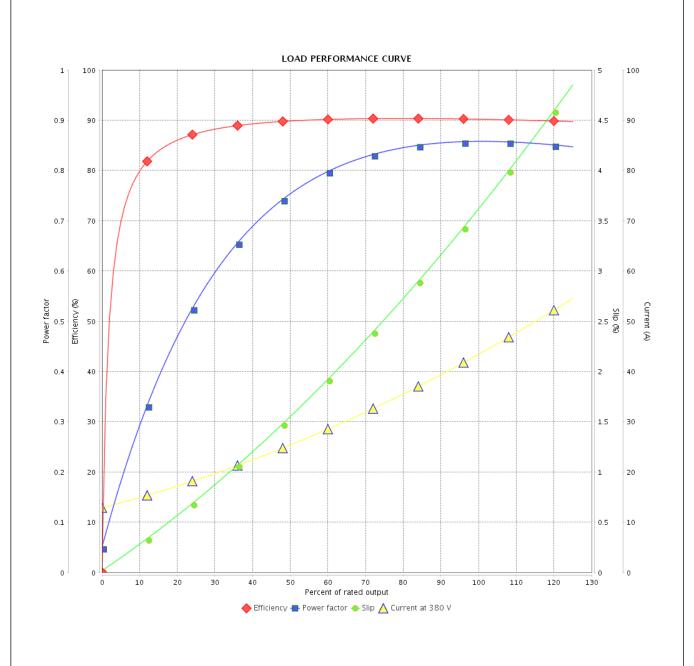
Customer

Product line : NEMA Premium Efficiency Three- Product code :

Phase

Catalog # : 03018ET3E286T-W22G

12700708



Performance	: 3	80 V 50 Hz 4P				
Rated current	: 4	3.1 A	Moment o	f inertia (J)		
LRC	: 5	.0	Duty cycle	<del>)</del>	: Cont.(S1)	
Rated torque	: 1	09 ft.lb	Insulation	class	: F	
Locked rotor torque	e :1	70 %	Service fa	Service factor		
Breakdown torque	:1	90 %	Temperati	ure rise	: 80 K	
Rated speed	: 1	445 rpm	Design		: B	
Rev.		Changes Summary	I	Performed	Checked	Date
Performed by						
Checked by		-			Page	Revision
Date	14/04/2022				5/11	

### Three Phase Induction Motor - Squirrel Cage

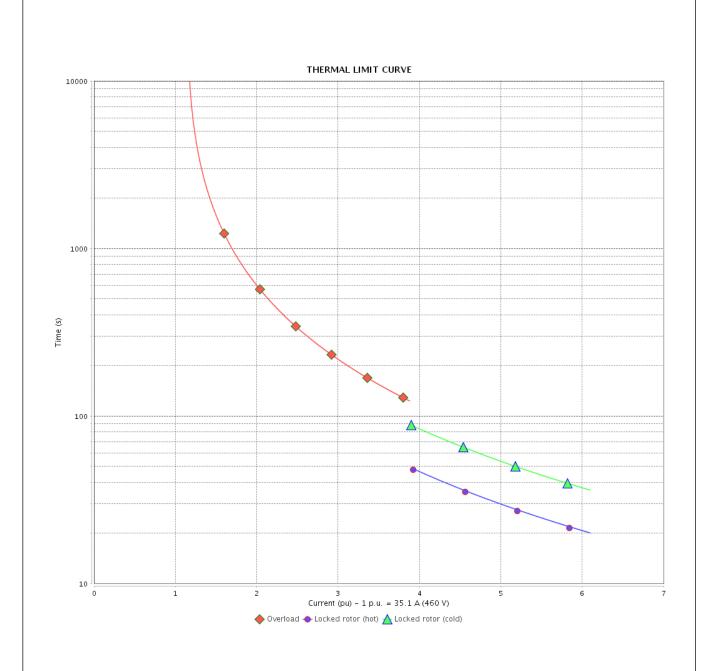


Customer	:					
Product line		NEMA Premium Efficiency <sup>-</sup> hase		Product code :	12700708 03018ET3E2	86T-W22G
Performance		08-230/460 V 60 Hz 4P				
Rated current LRC	: 6		Moment of Duty cycle		: Cont.(S1)	
Rated torque Locked rotor torqu		9.3 ft.lb 40 %	Insulation Service fac		: F : 1.25	
Breakdown torque	e : 2	40 %	Temperatu		: 80 K	
Rated speed	: 1	765 rpm	Design		: B	
Heating constant						
Cooling constant Rev.		Changes Summary		Performed	Checked	Date
				. 5.15111104	20000	
Performed by						
Checked by	·				Page	Revision
Data	14/04/2022				6/11	

### Three Phase Induction Motor - Squirrel Cage



Customer



Rev.		Changes Summary	Performed	Checked	Date
Performed by					
Checked by				Page	Revision
Date	14/04/2022			7 / 11	

### Three Phase Induction Motor - Squirrel Cage

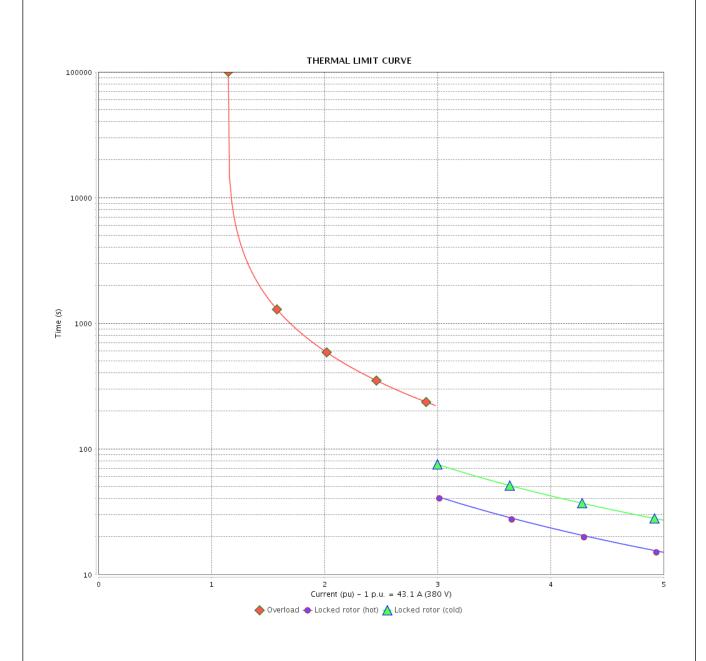


Customer	:				
Product line	: NEMA Premium Efficiency	Three-	Product code :	12700708	
	Phase		Catalog # :	03018ET3E2	86T-W22C
		<u>'</u>	Catalog # .	03016E13E2	001-0022G
Performance	: 380 V 50 Hz 4P	T			
Rated current LRC	: 43.1 A : 5.0	Moment o	f inertia (J)	: Cont.(S1)	
Rated torque	: 109 ft.lb	Insulation	class	: F	
Locked rotor torque	: 170 %	Service fa	ctor	: 1.00	
Breakdown torque Rated speed	: 190 % : 1445 rpm	Temperatu Design	ire rise	: 80 K : B	
Heating constant	·				
Cooling constant					
Rev.	Changes Summary	1	Performed	Checked	Date
Performed by					·
Checked by				Page	Revision

#### Three Phase Induction Motor - Squirrel Cage



Customer



Rev.		Changes Summary	Performed	Checked	Date
Performed by					
Checked by				Page	Revision
Date	14/04/2022			9/11	

### VFD OPERATION CURVE

#### Three Phase Induction Motor - Squirrel Cage



Revision

Page 10 / 11

Customer :

Checked by

Date

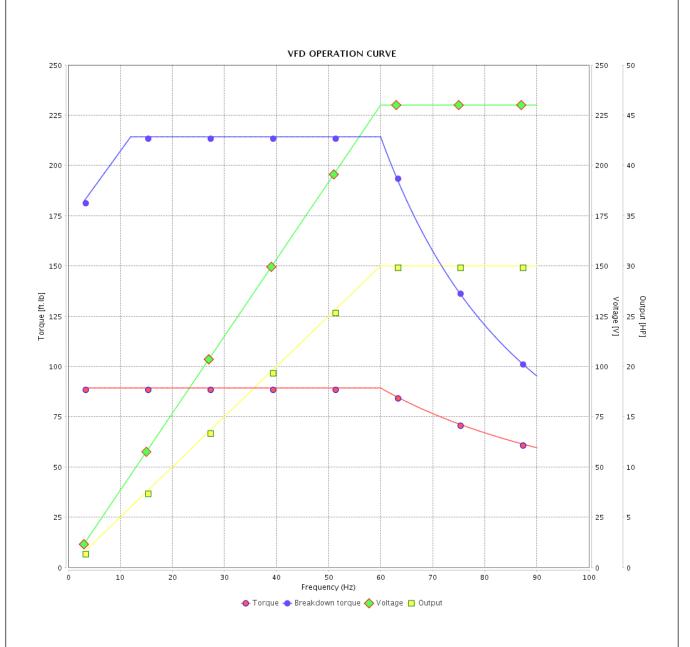
14/04/2022

Product line : NEMA Premium Efficiency Three- Product

Phase

Product code: 12700708

Catalog #: 03018ET3E286T-W22G



Performance : 208-230/460 V 60 Hz 4P : 77.6-70.2/35.1 A Rated current Moment of inertia (J) **LRC** Duty cycle : Cont.(S1) : 6.1 Insulation class : 89.3 ft.lb : F Rated torque Locked rotor torque : 240 % Service factor : 1.25 Breakdown torque : 240 % Temperature rise : 80 K Rated speed : 1765 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by

## VFD OPERATION CURVE

#### Three Phase Induction Motor - Squirrel Cage



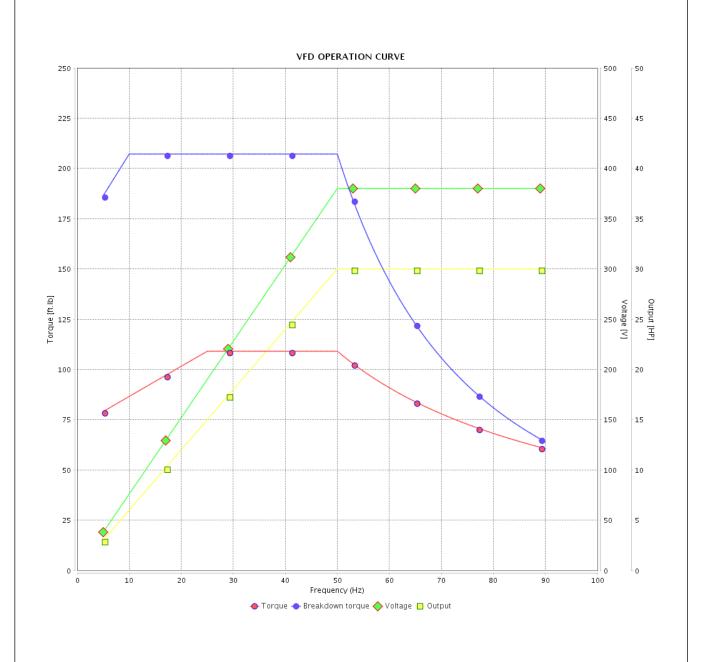
Customer

Product line : NEMA Premium Efficiency Three- Product code : 12700708

Phase

Catalog #: 03018ET3E286T-W22G

11 / 11



Performance	: 380 V 50 Hz 4P				
Rated current LRC Rated torque Locked rotor torque	: 43.1 A : 5.0 : 109 ft.lb : 170 %	Moment of inertia (J)  Duty cycle : Cont.(S1  Insulation class : F  Service factor : 1.00			
Breakdown torque Rated speed	: 190 % : 1445 rpm	Temperature rise : 80 K Design : B			
Rev.	Changes Summary	Perfor	med	Checked	Date
Performed by					
Checked by				Page	Revision

14/04/2022

Date

