DATA SHEET

Three Phase Induction Motor - Squirrel Cage



13.9/7.39

0.70

0.81

0.86

Customer :

Product line : NEMA Premium Efficiency Three- Product code : 13163453

Phase

Catalog #: 01536ET3E254TC-SG

Frame : 254/6TC 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 : 175 lb

13.0/6.50

Protection degree : IP55 Moment of inertia (J) : 0.8718 sq.ft.lb

Design : B Output [HP] 15 12.5 12.5 Poles 2 2 2 Frequency [Hz] 60 50 50 Rated voltage [V] 230/460 190/380 220/415 Rated current [A] 34.8/17.4 35.4/17.7 32.3/17.1 L. R. Amperes [A] 237/118 244/122 245/130 LRC [A] 7.6x(Code J) 6.8x(Code G) 6.9x(Code H)

Rated speed [RPM] 3525 2920 2930 Slip [%] 2.08 2.67 2.33 Rated torque [ft.lb] 22.3 22.5 22.4 Locked rotor torque [%] 200 190 210 Breakdown torque [%] 300 290 330 Service factor 1.15 1.00 1.00 Temperature rise 80 K 105 K 105 K Locked rotor time 25s (cold) 14s (hot) 0s (cold) 0s (hot) 0s (cold) 0s (hot) Noise level² 75.0 dB(A) 72.0 dB(A) 72.0 dB(A) 25% 89.2 90.7 90.1 50% 89.5 90.2 90.0 Efficiency (%) 75% 90.6 90.7 91.0 89.8 90.3 100% 91.0 25% 0.47 0.43 0.47

13.6/6.80

0.74

0.84

100% 0.87 0.88

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

0.73

0.83

Bearing type : 6309 Z C3 6208 Z C3 Max. traction : 267 lb Sealing : V'Ring Without Max. compression : 442 lb

ing : V'Ring Without Bearing Seal

Lubrication interval: 15797 h20000 hLubricant amount: 13 g8 g

Lubricant type : Mobil Polyrex EM

Notes

No load current [A]

Power Factor

USABLE @208V 38.5A SF 1.00 SFA 38.5A

50%

75%

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.

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TORQUE AND CURRENT VS SPEED CURVE

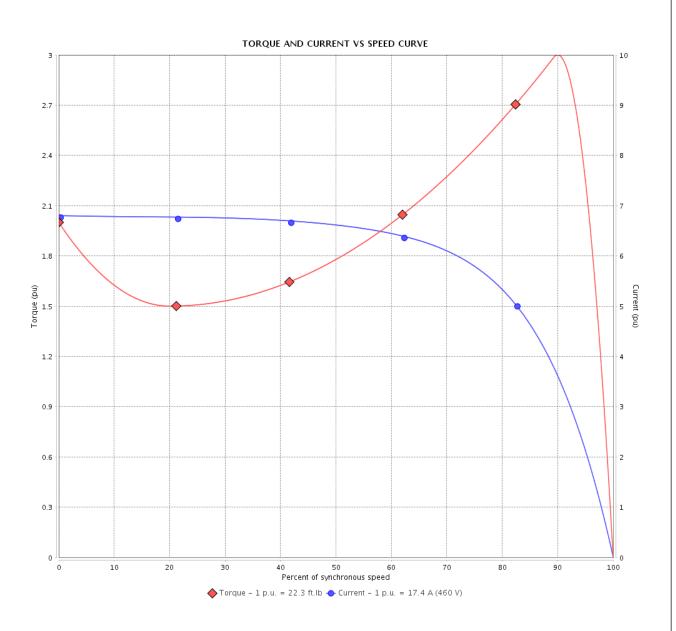
Three Phase Induction Motor - Squirrel Cage



Customer

Product line : NEMA Premium Efficiency Three-Product code: 13163453

Catalog #: 01536ET3E254TC-SG



Performance : 230/460 V 60 Hz 2P Rated current : 34.8/17.4 A Moment of inertia (J) : 0.8718 sq.ft.lb **LRC** : 6.8 Duty cycle : Cont.(S1) : F Insulation class Rated torque : 22.3 ft.lb Locked rotor torque : 200 % Service factor : 1.15 Breakdown torque : 300 % Temperature rise : 80 K Rated speed : 3525 rpm Design : B

Locked rotor time : 25s (cold) 14s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage Customer Product line : NEMA Premium Efficiency Three-Product code: 13163453 Catalog #: 01536ET3E254TC-SG TORQUE AND CURRENT VS SPEED CURVE 2.7 2.1 1.8 Torque (pu) Current 1.2 0.6 0.3 40 50 60 Percent of synchronous speed ◆ Torque - 1 p.u. = 22.5 ft.lb ◆ Current - 1 p.u. = 17.7 A (380 V) : 190/380 V 50 Hz 2P Performance : 0.8718 sq.ft.lb Rated current : 35.4/17.7 A Moment of inertia (J) : Cont.(S1) LRC : 6.9 Duty cycle Rated torque : 22.5 ft.lb Insulation class

Breakdown torque : 290			-	: 1.00 : 105 K : B	
: 0s	s (cold) 0s (hot)				
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	e : 29 : 29	e : 290 % : 2920 rpm e : 0s (cold) 0s (hot) Changes Summary	e : 290 % Temperature : 2920 rpm Design e : 0s (cold) 0s (hot) Changes Summary	e : 290 % Temperature rise Design e : 0s (cold) 0s (hot) Changes Summary Performed	e : 290 % Temperature rise : 105 K Design : B e : 0s (cold) 0s (hot) Changes Summary Performed Checked

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

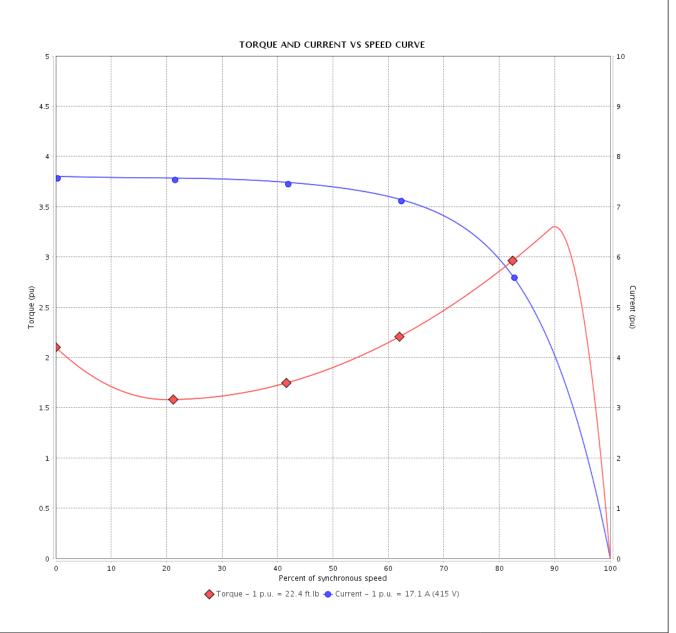


Customer :

Product line : NEMA Premium Efficiency Three- Product code : 13163453

Phase

Catalog #: 01536ET3E254TC-SG



Performance : 220/415 V 50 Hz 2P Rated current : 32.3/17.1 A Moment of inertia (J) : 0.8718 sq.ft.lb **LRC** : 7.6 Duty cycle : Cont.(S1) : 22.4 ft.lb Insulation class Rated torque : F Locked rotor torque : 210 % Service factor : 1.00 Breakdown torque : 330 % Temperature rise : 105 K Rated speed : 2930 rpm Design : B

Locked rotor time : 0s (cold) 0s (hot)

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LOAD PERFORMANCE CURVE

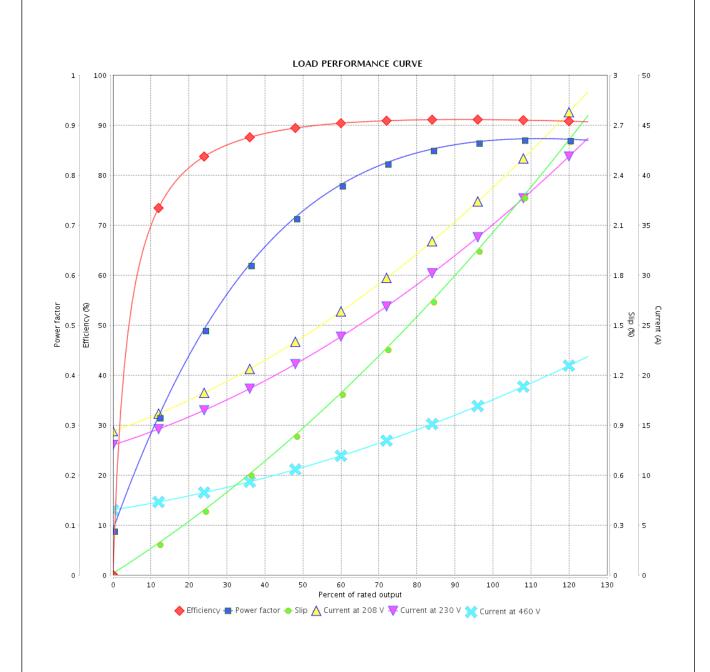
Three Phase Induction Motor - Squirrel Cage



Customer

Product line : NEMA Premium Efficiency Three-Product code: 13163453

Catalog #: 01536ET3E254TC-SG



Performance	erformance : 230/460 V 60 Hz 2P					
Rated current	: 3	34.8/17.4 A	Moment o	f inertia (J)	: 0.8718 sq.ft	.lb
LRC	: 6	3.8	Duty cycle	;	: Cont.(S1)	
Rated torque	: 2	22.3 ft.lb	Insulation	class	: F	
Locked rotor torque		200 %	Service fa	ctor	: 1.15	
Breakdown torque	: 3	800 %	Temperati	Temperature rise		
Rated speed	: 3	3525 rpm	Design		: B	
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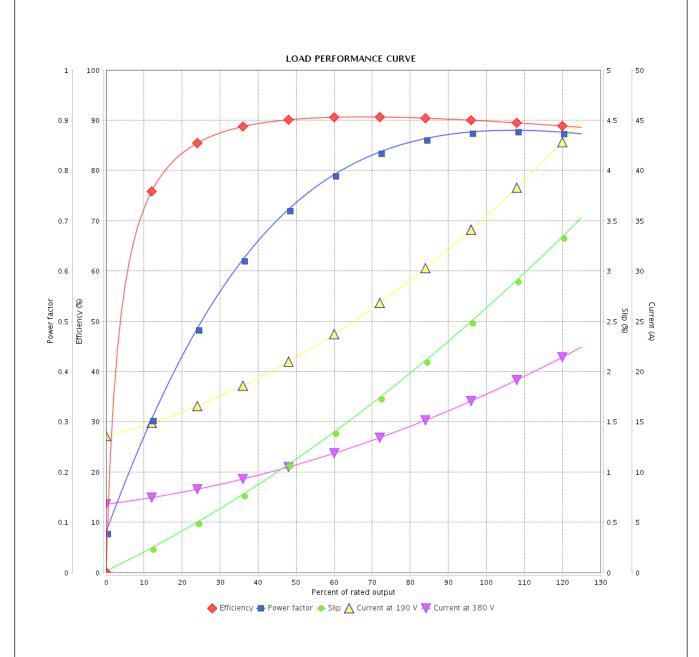


Customer :

Product line : NEMA Premium Efficiency Three- Product code : 13163453

Phase

Catalog #: 01536ET3E254TC-SG



Performance	: 190/380 V 50 Hz 2P				
Rated current	: 35.4/17.7 A	: 35.4/17.7 A Moment of inertia (J)		: 0.8718 sq.ft.lb	
LRC	: 6.9	Duty cycle	;	: Cont.(S1)	
Rated torque	: 22.5 ft.lb	Insulation	class	: F	
Locked rotor torque	: 190 %	Service fa	ctor	: 1.00	
Breakdown torque	: 290 %	Temperature rise		: 105 K	
Rated speed	: 2920 rpm	Design		: B	
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Three Phase Induction Motor - Squirrel Cage

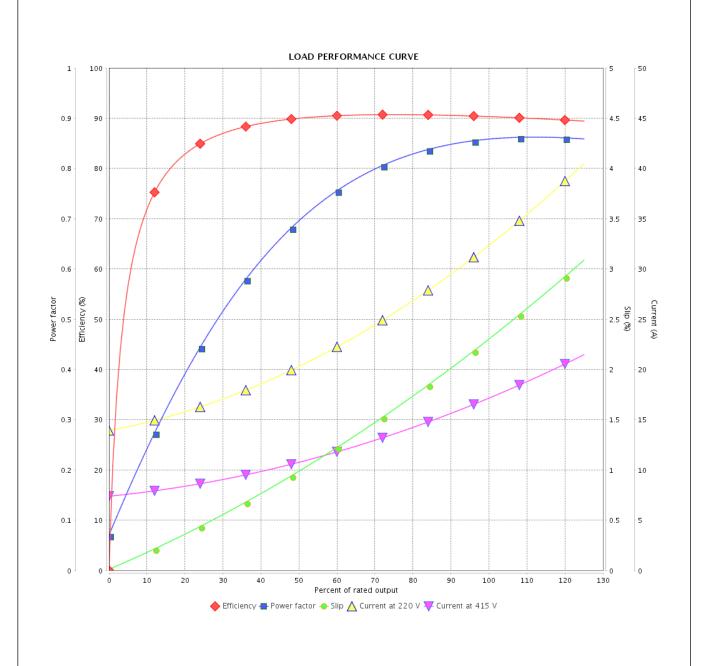


Customer

Product line : NEMA Premium Efficiency Three- Product code : 13163453

Phase

Catalog #: 01536ET3E254TC-SG



Performance	nce : 220/415 V 50 Hz 2P					
Rated current		32.3/17.1 A	Moment o	f inertia (J)	: 0.8718 sq.ft.lb	
LRC	: '	7.6	Duty cycle	;	: Cont.(S1)	
Rated torque	: :	22.4 ft.lb	Insulation	class	: F	
Locked rotor torque	e ::	210 %	Service fa	ctor	: 1.00	
Breakdown torque	::	330 %	Temperature rise		: 105 K	
Rated speed	: 2930 rpm		Design	Design		
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Three Phase Induction Motor - Squirrel Cage

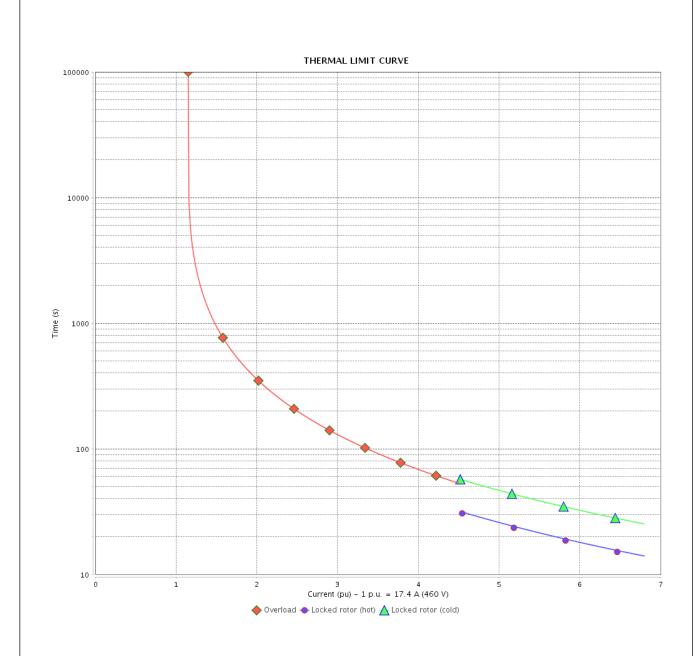


Customer	:					
Product line		NEMA Premium Efficiency	Three-	Product code :	13163453	
	P	hase		Catalog # :	01536ET3E2	54TC-SG
Performance		30/460 V 60 Hz 2P 4.8/17.4 A	Momento	finartia (I)	· 0 9719 og ft l	h
Rated current LRC	: 6.	.8	Duty cycle	f inertia (J)	: 0.8718 sq.ft.l : Cont.(S1)	U
Rated torque Locked rotor torque		2.3 ft.lb 00 %	Insulation Service fa	class	: F : 1.15	
Breakdown torque	: 30	00 %	Temperatu		: 80 K	
Rated speed	: 38	525 rpm	Design		: B	
Heating constant						
Cooling constant Rev.		Changes Summers		Performed	Checked	Date
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Three Phase Induction Motor - Squirrel Cage



Customer



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Three Phase Induction Motor - Squirrel Cage

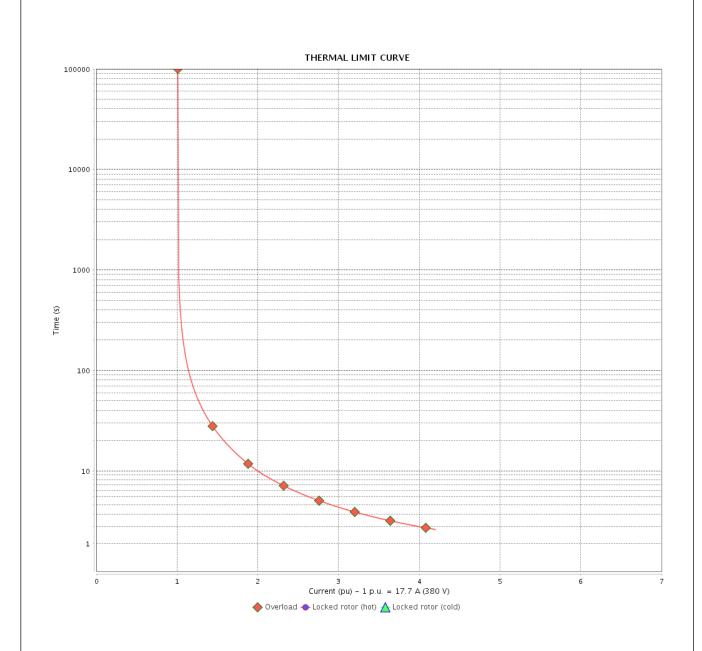


Customer	:			
Product line	: NEMA Premium Efficiency Phase		13163453	2.00
		Catalog # :	01536ET3E254T0	J-8G
Performance	: 190/380 V 50 Hz 2P			
Rated current	: 35.4/17.7 A	Moment of inertia (J)	: 0.8718 sq.ft.lb	
LRC	: 6.9 : 22.5 ft.lb	Duty cycle Insulation class	: Cont.(S1)	
Rated torque Locked rotor torque	: 22.5 π.id : 190 %	Service factor	: F : 1.00	
Breakdown torque	: 290 %	Temperature rise	: 105 K	
Rated speed	: 2920 rpm	Design	: B	
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Cooling constant Rev.	Changes Summary	Performed	Checked	Date
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Three Phase Induction Motor - Squirrel Cage



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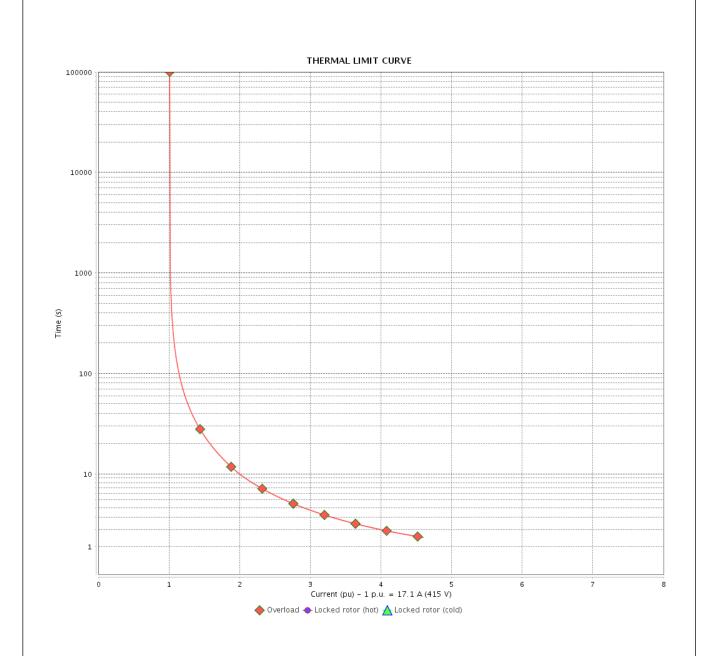


Customer		:				
Product line		: NEMA Premium Efficiency Phase		Product code :	13163453	
				Catalog # :	01536ET3E2	54TC-SG
			•			
Performance		: 220/415 V 50 Hz 2P	N4	-£:t: (1)	. 0 0740 # 1	L
Rated current LRC		: 32.3/17.1 A : 7.6	Duty cycle	of inertia (J) e	: 0.8718 sq.ft.l : Cont.(S1)	D
Rated torque		: 22.4 ft.lb	Insulation	class	: F	
Locked rotor tord Breakdown torqu		: 210 % : 330 %	Service fa Temperat		: 1.00 : 105 K	
Rated speed		: 2930 rpm	Design		: B	
Heating constan						
Cooling constant	t					
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Three Phase Induction Motor - Squirrel Cage



Customer :



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Checked by

Date

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Product line : NEMA Premium Efficiency Three-

Phase

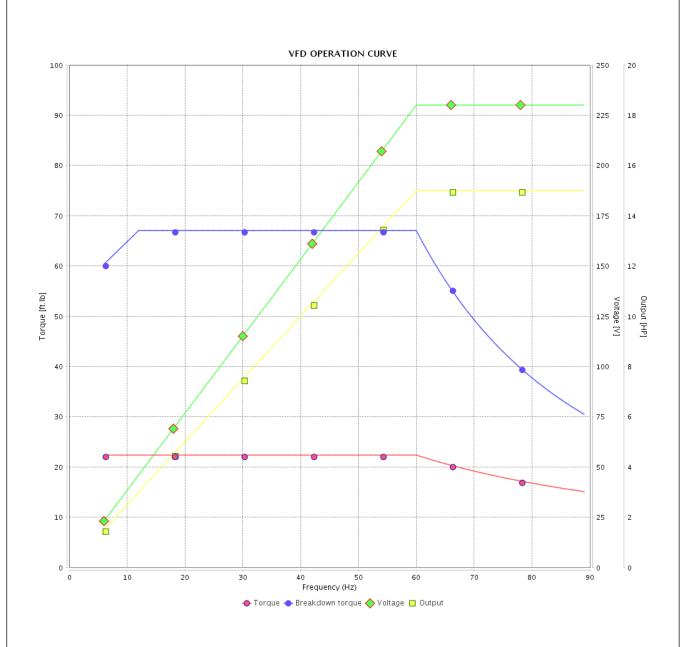
Product code: 13163453

Catalog #: 01536ET3E254TC-SG

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Revision



Performance : 230/460 V 60 Hz 2P Rated current : 34.8/17.4 A Moment of inertia (J) : 0.8718 sq.ft.lb **LRC** Duty cycle : Cont.(S1) : 6.8 Insulation class : 22.3 ft.lb : F Rated torque Locked rotor torque : 200 % Service factor : 1.15 Breakdown torque : 300 % Temperature rise : 80 K Rated speed : 3525 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

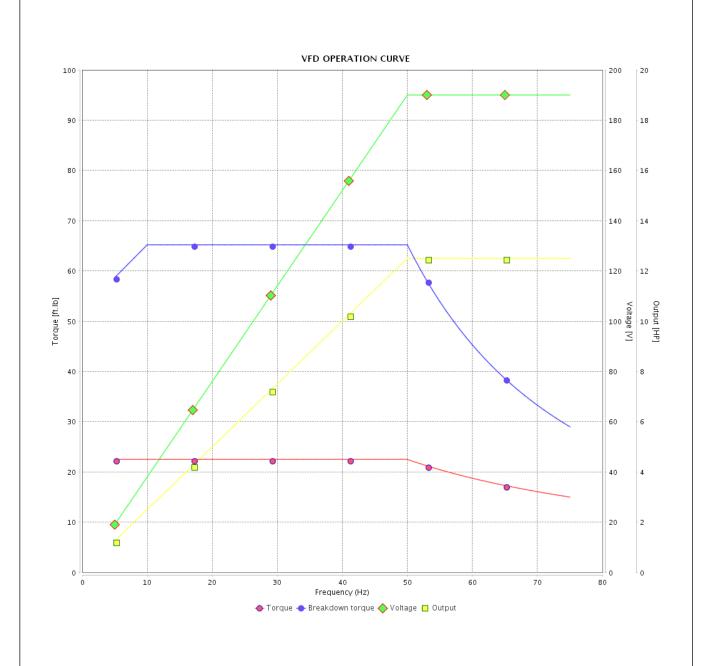


Customer

Product line : NEMA Premium Efficiency Three- Product code : 13163453

Phase

Catalog #: 01536ET3E254TC-SG



Performance	: 19	: 190/380 V 50 Hz 2P						
Rated current		5.4/17.7 A Moment of inertia (J)		: 0.8718 sq.ft.lb				
LRC	: 6.	-		Duty cycle		: Cont.(S1)		
Rated torque	: 22	2.5 ft.lb	Insulation class		: F			
Locked rotor torq	ue : 19	90 %	Service fa	Service factor		: 1.00		
Breakdown torqu	e : 29	90 %	Temperati	Temperature rise		: 105 K		
Rated speed	: 29	2920 rpm Design			: B			
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



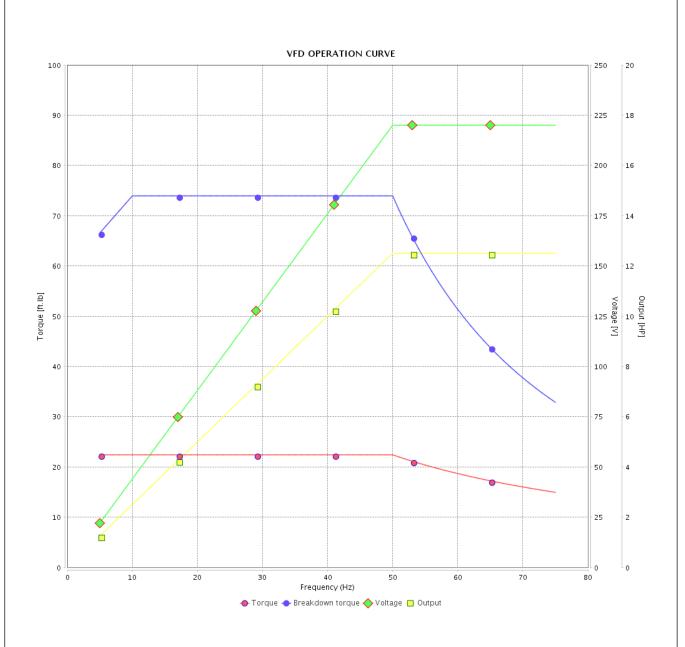
Customer :

Product line : NEMA Premium Efficiency Three-

Phase

Product code: 13163453

Catalog #: 01536ET3E254TC-SG



Performance		: 220/415 V 50 Hz 2P							
Rated current LRC Rated torque Locked rotor tord Breakdown torqu Rated speed	: 7. : 22 que : 21 ue : 33	2.3/17.1 A 6 2.4 ft.lb 10 % 30 % 930 rpm	Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design		: 0.8718 sq.ft.lb : Cont.(S1) : F : 1.00 : 105 K : B				
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