DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three- Product code : 13163469

Phase

Catalog #: 02036OT3E254TC-SG

Frame : 254/6TC Cooling method : IC01 - ODP 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 : 151 lb

Design : B Moment of inertia (J) : 0.7848 sq.ft.lb

200.g.,		. –	moment of mortia (o)	
Output [HP]		20	20	20
Poles		2	2	2
Frequency [Hz]		60	50	50
Rated voltage [V]		230/460	190/380	220/415
Rated current [A]		47.6/23.8	58.0/29.0	51.7/27.4
L. R. Amperes [A]		286/143	261/131	264/140
LRC [A]		6.0x(Code G)	4.5x(Code D)	5.1x(Code E)
No load current [A]		17.0/8.50	16.2/8.09	17.1/9.04
Rated speed [RPM	1]	3525	2895	2905
Slip [%]		2.08	3.50	3.17
Rated torque [ft.lb]		29.8	36.3	36.2
Locked rotor torque	e [%]	180	130	140
Breakdown torque	[%]	240	190	210
Service factor		1.15	1.00	1.00
Temperature rise		80 K	105 K	80 K
Locked rotor time		23s (cold) 13s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)
Noise level ²		70.0 dB(A)	68.0 dB(A)	68.0 dB(A)
	25%	90.0	92.6	91.6
Efficiency (%)	50%	90.2	90.6	90.6
Efficiency (70)	75%	91.0	89.5	90.0
	100%	91.0	87.2	88.7
	25%	0.49	0.56	0.51
Power Factor	50%	0.76	0.82	0.78
I OWEI FACIOI	75%	0.83	0.88	0.86
	100%	0.87	0.90	0.89

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

Bearing type : 6309 Z C3 6208 Z C3 Max. traction : 288 lb Sealing : Without Without Max. compression : 439 lb

Bearing Seal Bearing Seal

Lubrication interval:20000 h20000 hLubricant amount:13 g8 gLubricant type:Mobil Polyrex EM

Notes

USABLE @208V 52.6A SF 1.00 SFA 52.6A

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

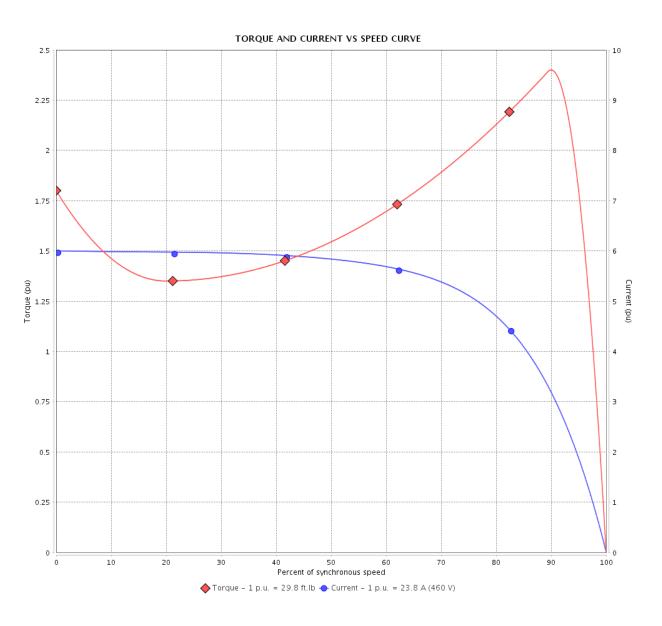
Three Phase Induction Motor - Squirrel Cage



Customer

Product line : NEMA Premium Efficiency Three-Product code: 13163469

Catalog #: 02036OT3E254TC-SG



Performance : 230/460 V 60 Hz 2P Rated current : 47.6/23.8 A Moment of inertia (J) : 0.7848 sq.ft.lb **LRC** : 6.0 Duty cycle : Cont.(S1) : F : 29.8 ft.lb Insulation class Rated torque Locked rotor torque : 180 % Service factor : 1.15 Breakdown torque : 240 % Temperature rise : 80 K Rated speed : 3525 rpm Design : B Locked rotor time

: 23s (cold) 13s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



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Three Phase Induction Motor - Squirrel Cage Customer Product line : NEMA Premium Efficiency Three-Product code: 13163469 Catalog #: 02036OT3E254TC-SG TORQUE AND CURRENT VS SPEED CURVE 4.5 1.8 3.5 1.4 1.2 Torque (pu) 0.8 0.4 0.2 100 Percent of synchronous speed ◆ Torque - 1 p.u. = 36.3 ft.lb ◆ Current - 1 p.u. = 29.0 A (380 V) Performance : 190/380 V 50 Hz 2P Rated current : 58.0/29.0 A Moment of inertia (J) : 0.7848 sq.ft.lb **LRC** : 4.5 Duty cycle : Cont.(S1) : 36.3 ft.lb Insulation class : F Rated torque Locked rotor torque : 130 % Service factor : 1.00 Breakdown torque : 190 % Temperature rise : 105 K Rated speed : 2895 rpm Design : B Locked rotor time : 0s (cold) 0s (hot) Date **Changes Summary** Performed Checked Rev.

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14/04/2022

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



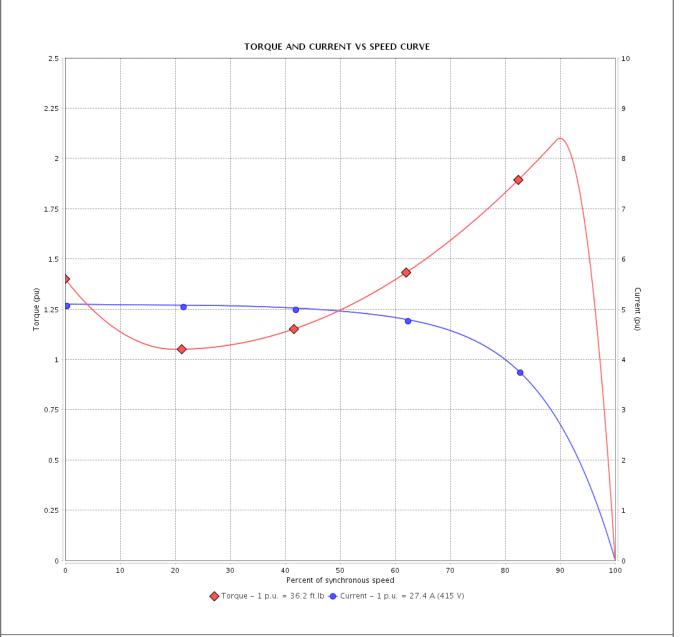
Customer :

Product line : NEMA Premium Efficiency Three-

Phase

Product code: 13163469

Catalog #: 02036OT3E254TC-SG



Performance : 220/415 V 50 Hz 2P Rated current : 51.7/27.4 A Moment of inertia (J) : 0.7848 sq.ft.lb **LRC** : 5.1 Duty cycle : Cont.(S1) : F Insulation class Rated torque : 36.2 ft.lb Locked rotor torque : 140 % Service factor : 1.00 Breakdown torque : 210 % Temperature rise : 80 K Rated speed : 2905 rpm Design : B

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

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LOAD PERFORMANCE CURVE

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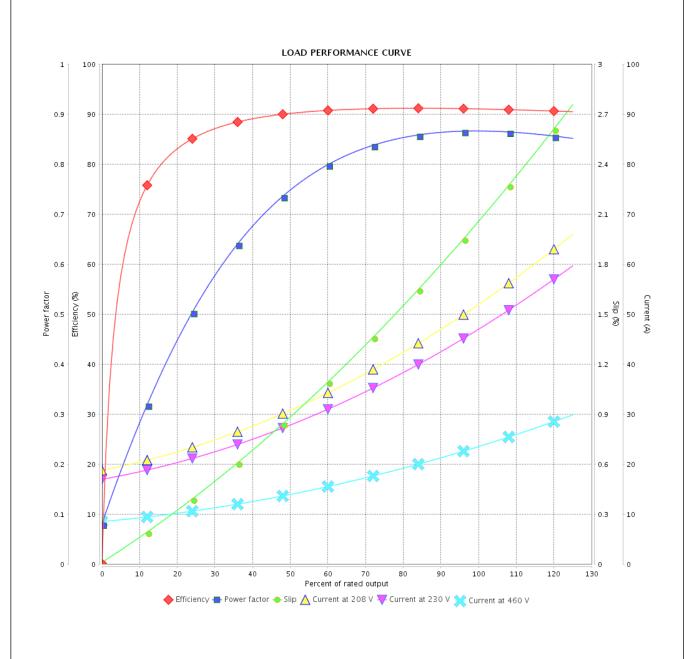


Customer

Product line : NEMA Premium Efficiency Three- Product code : 13163469

Phase

Catalog #: 02036OT3E254TC-SG



Performance	: 2	230/460 V 60 Hz 2P				
Rated current	: 4	47.6/23.8 A	Moment o	Moment of inertia (J)		lb
LRC	: (3.0	Duty cycle		: Cont.(S1)	
Rated torque	: 2	29.8 ft.lb	Insulation class		: F	
Locked rotor torque	e : '	180 %	Service fa	ctor	: 1.15	
Breakdown torque	: 2	240 %	Temperatu	ıre rise	: 80 K	
Rated speed	: ;	3525 rpm	Design		: B	
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



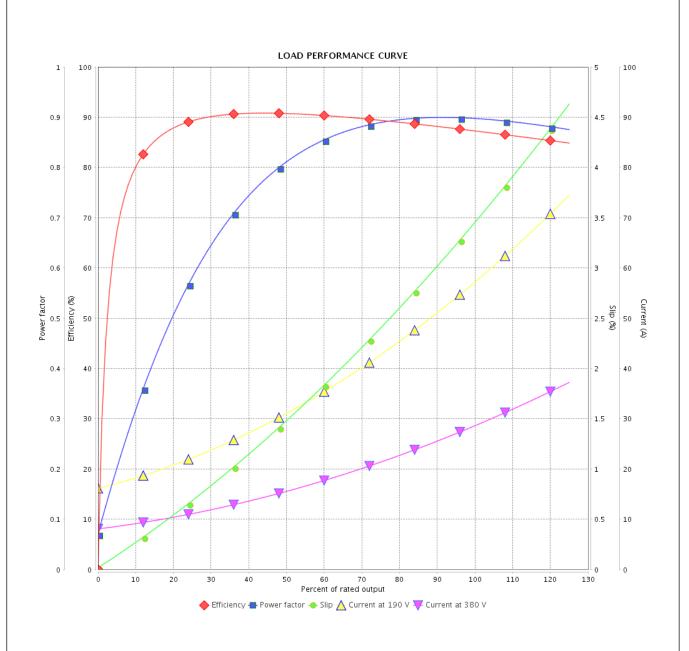
Customer :

Product line : NEMA Premium Efficiency Three- Product code :

Phase

Catalog #: 02036OT3E254TC-SG

13163469



Performance	: 190/380 V 50 Hz 2P				
Rated current : 58.0/29.0 A LRC : 4.5 Rated torque : 36.3 ft.lb Locked rotor torque : 130 % Breakdown torque : 190 % Rated speed : 2895 rpm		Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design		: 0.7848 sq.ft.lb : Cont.(S1) : F : 1.00 : 105 K : B	
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Three Phase Induction Motor - Squirrel Cage

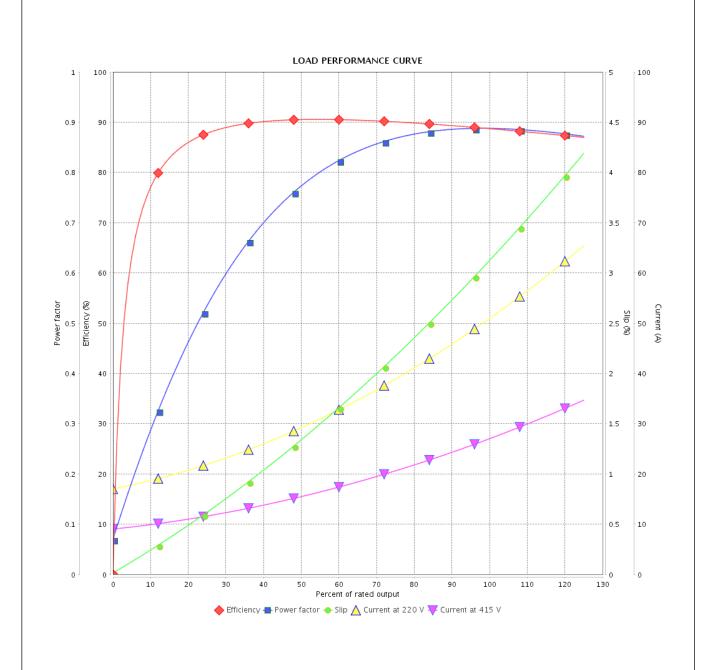


Customer

Product line : NEMA Premium Efficiency Three- Product code : 13163469

Phase

Catalog #: 02036OT3E254TC-SG



Performance		220/415 V 50 Hz 2P	P			
Rated current		51.7/27.4 A	Moment o	Moment of inertia (J)		.lb
LRC	:	5.1	Duty cycle		: Cont.(S1)	
Rated torque			class	: F		
Locked rotor torque	e :	140 %	Service fa	ctor	: 1.00	
Breakdown torque		210 %	Temperati	ıre rise	: 80 K	
Rated speed	:	2905 rpm	Design		: B	
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Three Phase Induction Motor - Squirrel Cage

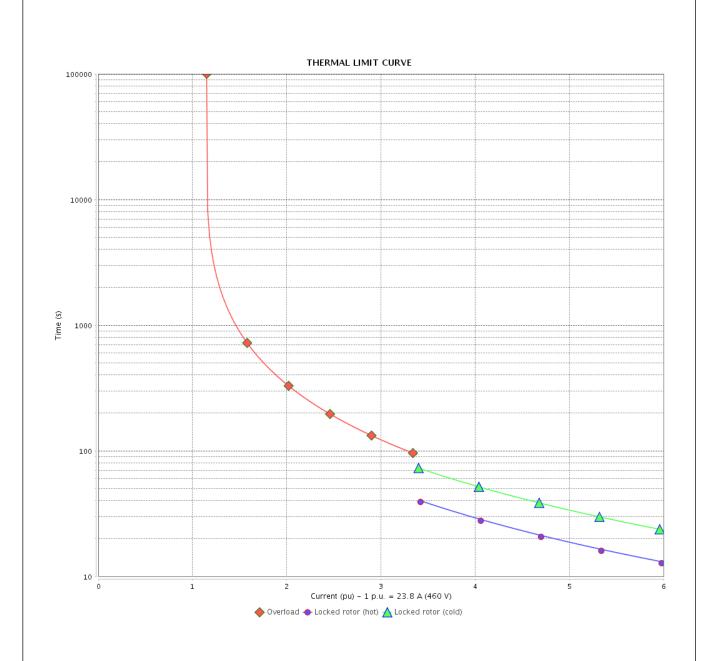


Customer		:				
Product line		: NEMA Premium Efficiency Phase		Product code :	13163469	NE 1 TO 00
				Catalog # :	02036OT3E2	2541C-SG
Performance		: 230/460 V 60 Hz 2P				
Rated current		: 47.6/23.8 A	Moment of	of inertia (J)	: 0.7848 sq.ft.l	b
LRC Rated torque		: 6.0 : 29.8 ft.lb	Duty cycle Insulation		: Cont.(S1) : F	
Locked rotor tord	que :	: 180 %	Service fa	actor	: 1.15	
Breakdown torqu	ie :	: 240 %	Temperat	ure rise	: 80 K : B	
Rated speed		: 3525 rpm	Design		. D	
Heating constant Cooling constant						
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Three Phase Induction Motor - Squirrel Cage



Customer



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Three Phase Induction Motor - Squirrel Cage

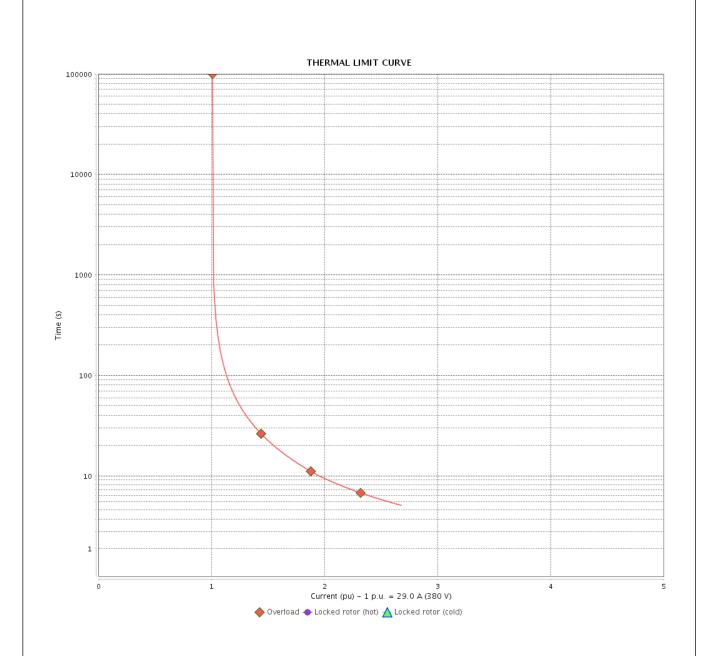


Customer	:				
Product line	: NEMA Premium Efficiend Phase		Product code : Catalog # :	13163469 02036OT3E	254TC-SG
Performance	: 190/380 V 50 Hz 2P				
Rated current	: 190/380 V 50 HZ ZP	Moment o	of inertia (J)	: 0.7848 sq.ft.	lb
LRC	: 4.5	Duty cycle	9	: Cont.(S1)	
Rated torque Locked rotor torque	: 36.3 ft.lb : 130 %	Insulation Service fa		: F : 1.00	
Breakdown torque	: 190 %	Temperati		: 105 K	
Rated speed	: 2895 rpm	Design		: B	
Heating constant					
Cooling constant Rev.	Changes Summary		Performed	Checked	Date
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Three Phase Induction Motor - Squirrel Cage



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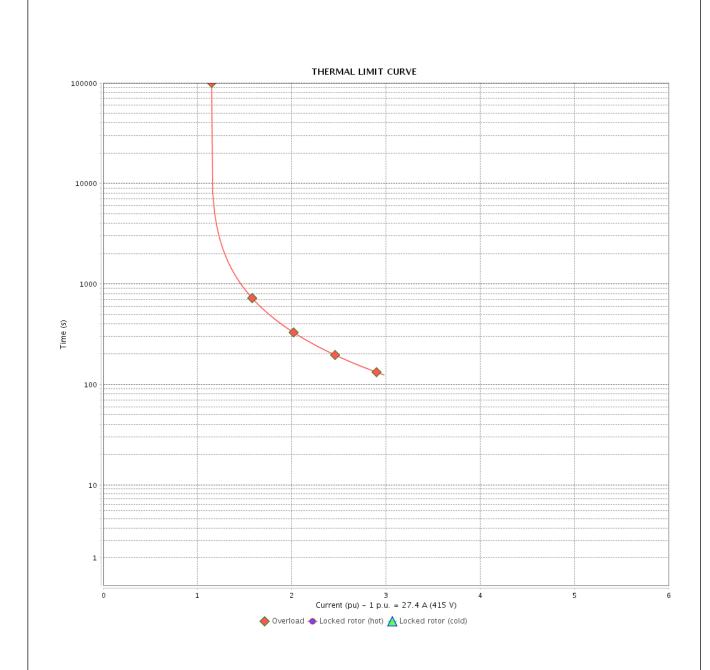


	:			
Product line	: NEMA Premium Efficiency Phase	Γhree- Product code : Catalog # :	13163469 02036OT3E254TC-SG	
Performance	: 220/415 V 50 Hz 2P			
	: 51.7/27.4 A	Moment of inertia (J)	: 0.7848 sq.ft.lb	
	: 5.1	Duty cycle		
Rated current LRC Rated torque	: 5.1 : 36.2 ft.lb	Duty cycle Insulation class Service factor	: Cont.(S1) : F	
LRC Rated torque Locked rotor torque Breakdown torque	: 5.1 : 36.2 ft.lb : 140 % : 210 %	Insulation class Service factor Temperature rise	: Cont.(S1) : F : 1.00 : 80 K	
LRC Rated torque Locked rotor torque Breakdown torque Rated speed	: 5.1 : 36.2 ft.lb : 140 %	Insulation class Service factor	: Cont.(S1) : F : 1.00	
LRC Rated torque Locked rotor torque Breakdown torque	: 5.1 : 36.2 ft.lb : 140 % : 210 % : 2905 rpm	Insulation class Service factor Temperature rise Design	: Cont.(S1) : F : 1.00 : 80 K : B	
LRC Rated torque Locked rotor torque Breakdown torque Rated speed Heating constant	: 5.1 : 36.2 ft.lb : 140 % : 210 %	Insulation class Service factor Temperature rise	: Cont.(S1) : F : 1.00 : 80 K	
LRC Rated torque Locked rotor torque Breakdown torque Rated speed Heating constant Cooling constant	: 5.1 : 36.2 ft.lb : 140 % : 210 % : 2905 rpm	Insulation class Service factor Temperature rise Design	: Cont.(S1) : F : 1.00 : 80 K : B	

Three Phase Induction Motor - Squirrel Cage



Customer :



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Date

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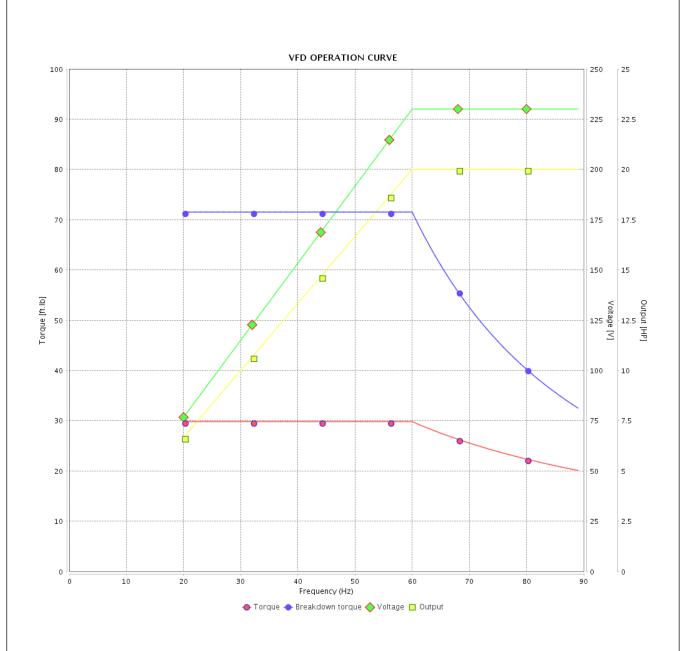
Product line : NEMA Premium Efficiency Three- F

Phase

Product code: 13163469

Catalog #: 02036OT3E254TC-SG

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Performance : 230/460 V 60 Hz 2P Rated current : 47.6/23.8 A Moment of inertia (J) : 0.7848 sq.ft.lb **LRC** Duty cycle : Cont.(S1) : 6.0 Insulation class : 29.8 ft.lb : F Rated torque Locked rotor torque : 180 % Service factor : 1.15 Breakdown torque : 240 % Temperature rise : 80 K Rated speed : 3525 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by Page Checked by Revision

