DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three- Product code : 14407389

Phase

Catalog #: 02012XT3E286T

Frame : 286T 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 : 496 lb
Protection degree : IP55 Moment of inertia (J) : 8.02 sq.ft.lb

Frotection degree		. 1F35 Monient of friends (3) . 6.02 sq.it.ib			Sq.ii.ib
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	29.6	27.9	27.2
L. R. Amperes [A]		348/174	163	167	177
LRC [A]		7.2x(Code H)	5.5x(Code F)	6.0x(Code G)	6.5x(Code H)
No load current [A]	18.0/9.00	9.50	10.0	10.5
Rated speed [RPN	<i>/</i> I]	1175	970	975	975
Slip [%]		2.08	3.00	2.50	2.50
Rated torque [ft.lb]		89.4	108	108	108
Locked rotor torque [%]		250	190	200	220
Breakdown torque	[%]	260	210	229	250
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 ²		59.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
	25%	91.5	91.3	90.7	89.9
Efficiency (%)	50%	91.7	90.2	90.2	89.5
Efficiency (70)	75%	91.7	91.0	91.0	91.0
	100%	91.7	89.5	90.2	90.2
	25%	0.45	0.50	0.47	0.44
Power Factor	50%	0.70	0.75	0.73	0.70
FOWEI FACIOI	75%	0.80	0.83	0.82	0.80
	100%	0.85	0.86	0.86	0.85

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

Bearing type : 6311 C3 6211 C3 Max. traction : 926 lb Sealing : Oil Seal Lip Seal Max. compression : 1422 lb

20000 h

Lubricant amount : 18 g 11 g Lubricant type : Mobil Polyrex EM

20000 h

Notes

Lubrication interval

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.

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DATA SHEET



Customer		

Thermal	protection
HIIGHIIIAI	protection

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

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Three Phase Induction Motor - Squirrel Cage Customer Product line : NEMA Premium Efficiency Three-Product code: 14407389 Catalog #: 02012XT3E286T TORQUE AND CURRENT VS SPEED CURVE 2.7 2.1 1.8 Current Torque (pu) 1.2 0.6 0.3 Percent of synchronous speed ◆ Torque - 1 p.u. = 89.4 ft.lb ◆ Current - 1 p.u. = 24.2 A (460 V) Performance : 230/460 V 60 Hz 6P Rated current : 48.4/24.2 A Moment of inertia (J) : 8.02 sq.ft.lb **LRC** : 7.2 Duty cycle : Cont.(S1) : 89.4 ft.lb Insulation class Rated torque : F : 250 % Locked rotor torque Service factor : 1.15 Breakdown torque : 260 % Temperature rise : 80 K Rated speed : 1175 rpm Design : B Locked rotor time : 39s (cold) 22s (hot) Rev. Performed Checked Date **Changes Summary**

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Three Phase Induction Motor - Squirrel Cage



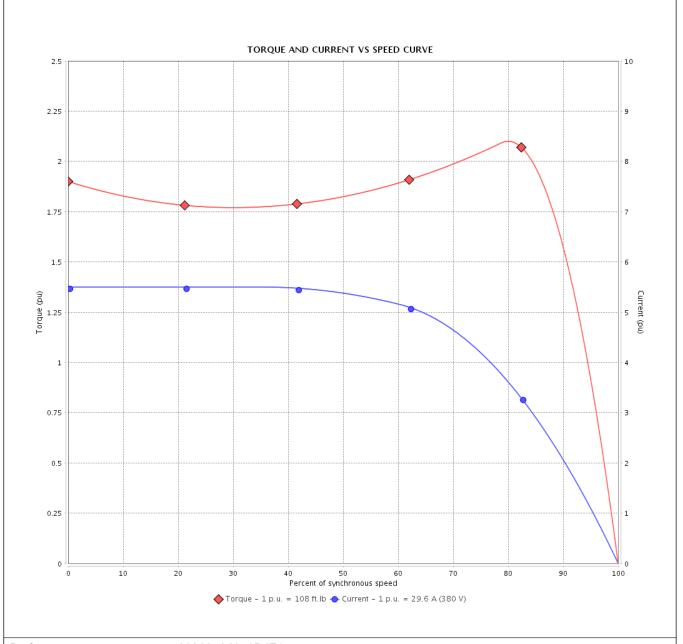
Customer :

Product line : NEMA Premium Efficiency Three-

Phase

Product code: 14407389

Catalog #: 02012XT3E286T



Performance : 380 V 50 Hz 6P IE1 Rated current : 29.6 A Moment of inertia (J) : 8.02 sq.ft.lb **LRC** : 5.5 Duty cycle : Cont.(S1) Insulation class Rated torque : 108 ft.lb : F Service factor Locked rotor torque : 190 % : 1.00 Breakdown torque : 210 % Temperature rise : 80 K Rated speed : 970 rpm Design : B

Locked rotor time : 45s (cold) 25s (hot)

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Three Phase Induction Motor - Squirrel Cage Customer Product line : NEMA Premium Efficiency Three-Product code: 14407389 Catalog #: 02012XT3E286T TORQUE AND CURRENT VS SPEED CURVE 2.25 1.75 1.5 (pd) 1.25 Current 0.5 0.25 Percent of synchronous speed ◆ Torque - 1 p.u. = 108 ft.lb ◆ Current - 1 p.u. = 27.9 A (400 V) Performance : 400 V 50 Hz 6P IE2 Rated current : 27.9 A Moment of inertia (J) : 8.02 sq.ft.lb **LRC** : 6.0 Duty cycle : Cont.(S1) : 108 ft.lb Insulation class : F Rated torque : 200 % : 1.00 Locked rotor torque Service factor : 80 K Breakdown torque : 229 % Temperature rise Rated speed : B : 975 rpm Design Locked rotor time : 45s (cold) 25s (hot)

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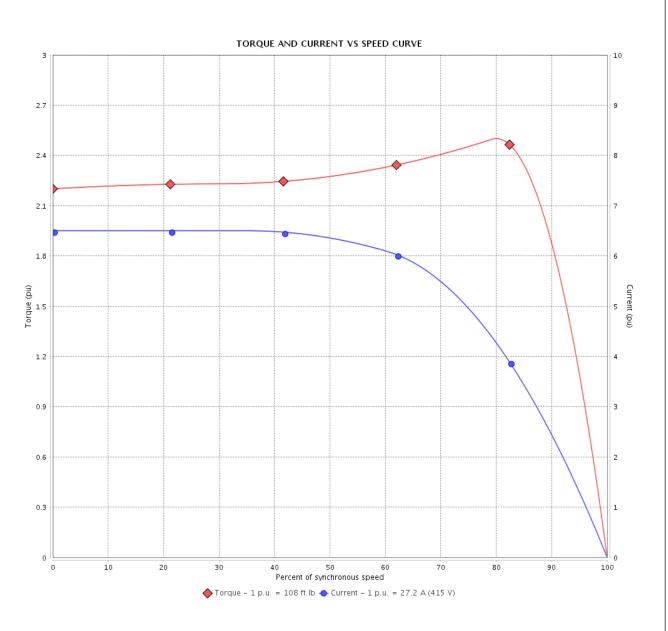


Customer

Product line : NEMA Premium Efficiency Three-

Product code: 14407389

Catalog #: 02012XT3E286T



Performance : 415 V 50 Hz 6P IE2 Rated current : 27.2 A Moment of inertia (J) : 8.02 sq.ft.lb **LRC** : 6.5 Duty cycle : Cont.(S1) Insulation class Rated torque : 108 ft.lb : F Locked rotor torque : 220 % Service factor : 1.00 Breakdown torque : 250 % Temperature rise : 80 K Rated speed : 975 rpm Design : B

Locked rotor time : 45s (cold) 25s (hot)

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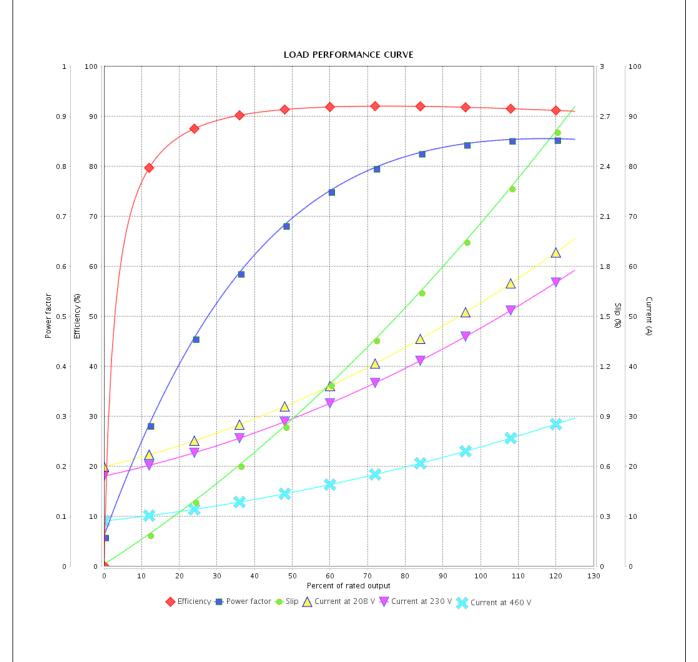


Customer

Product line : NEMA Premium Efficiency Three- Product code : 14407389

Phase

Catalog #: 02012XT3E286T



Performance	: 2	230/460 V 60 Hz 6P				
Rated current	: 4	18.4/24.2 A	Moment o	f inertia (J)	: 8.02 sq.ft.lb	
LRC	: 7	7.2	Duty cycle	;	: Cont.(S1)	
Rated torque	: 8	39.4 ft.lb	Insulation	class	: F	
Locked rotor torque	e : 2	250 %	Service fa	Service factor		
Breakdown torque	: 2	260 %	Temperature rise		: 80 K	
Rated speed	: 1175 rpm		Design	Design		
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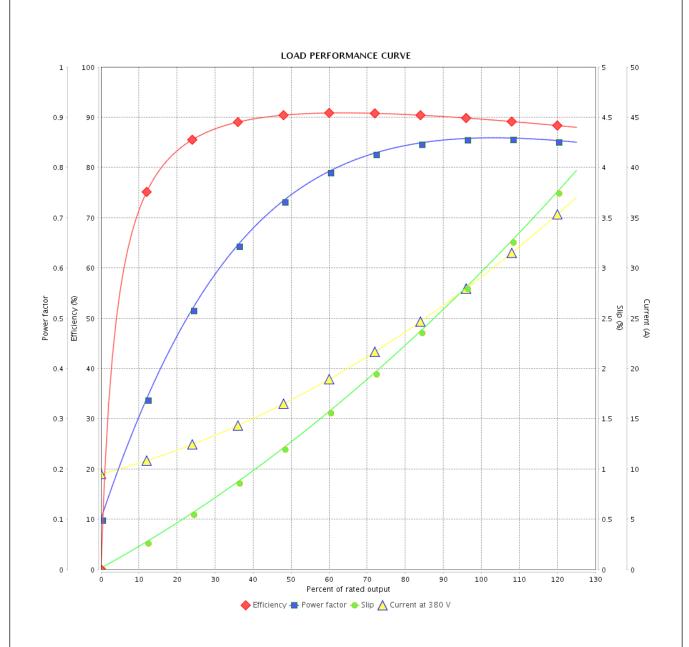
Customer :

Product line : NEMA Premium Efficiency Three- Product code :

Phase

Catalog #: 02012XT3E286T

14407389



Performance : 380 V 50 Hz 6P IE1 Rated current : 29.6 A Moment of inertia (J) : 8.02 sq.ft.lb **LRC** : 5.5 Duty cycle : Cont.(S1) : 108 ft.lb Insulation class Rated torque : F Locked rotor torque : 190 % Service factor : 1.00 Breakdown torque : 210 % Temperature rise : 80 K Rated speed : 970 rpm Design : B Changes Summary Rev. Performed Checked Date

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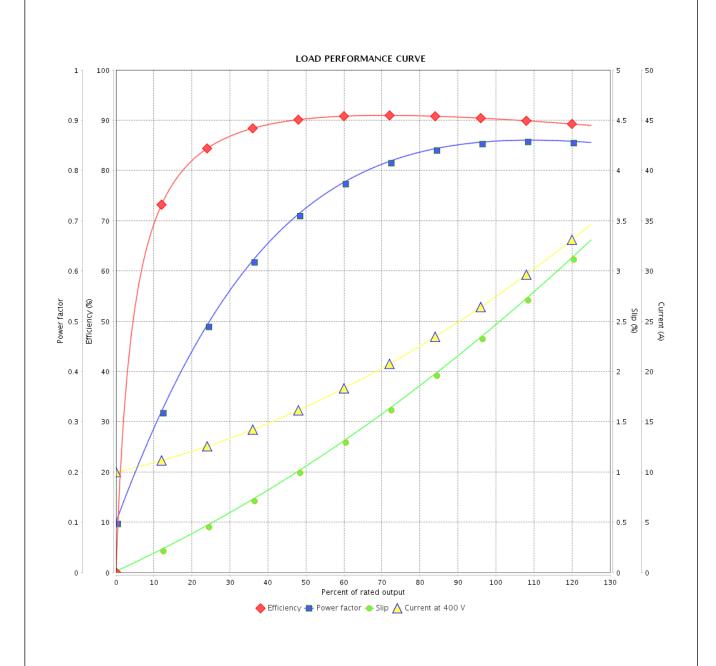


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Product line : NEMA Premium Efficiency Three- Product code : 14407389

Phase

Catalog #: 02012XT3E286T



Performance	: 400 V 50 Hz 6P IE2				
Rated current LRC Rated torque Locked rotor torque	: 27.9 A : 6.0 : 108 ft.lb : 200 % : 229 %	Duty cycl Insulation Service fa	n class actor	: 8.02 sq.ft.lb : Cont.(S1) : F : 1.00	
Breakdown torque Rated speed	: 229 % : 975 rpm	Temperature rise Design		: 80 K : B	
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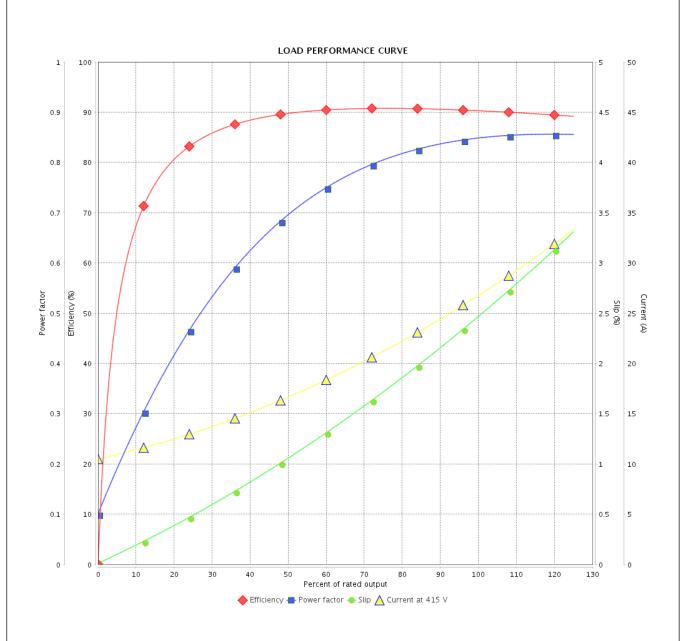
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Product line : NEMA Premium Efficiency Three- F

Phase

Product code: 14407389

Catalog #: 02012XT3E286T



Performance	: 415 V 50 Hz 6P IE2				
Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed	: 27.2 A : 6.5 : 108 ft.lb : 220 % : 250 % : 975 rpm	Moment of Duty cycle Insulation Service fa Temperation	class ctor	: 8.02 sq.ft.lb : Cont.(S1) : F : 1.00 : 80 K : B	
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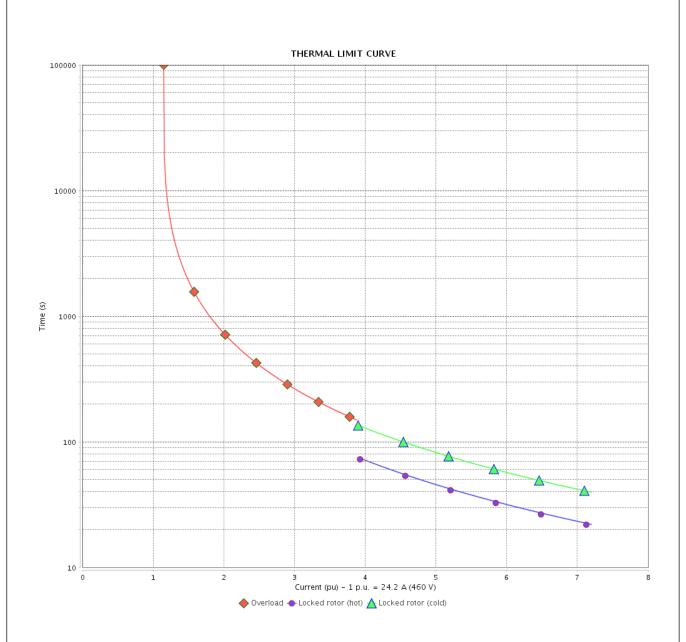


Product line	:	NEMA Premium Efficiency	Γhree-	Product code :	14407389	
	F	Phase		Catalog # :	02012XT3E2	286T
Performance Rated current LRC Rated torque	: 4 : 7 : 8	230/460 V 60 Hz 6P 48.4/24.2 A 7.2 39.4 ft.lb	Duty cycle Insulation	class	: 8.02 sq.ft.lb : Cont.(S1) : F	
Rated current LRC Rated torque Locked rotor tord Breakdown torqu Rated speed	: 4 : 7 : 8 que : 2 ue : 2	18.4/24.2 A 7.2	Duty cycle	e ı class actor	: Cont.(S1)	
Rated current LRC Rated torque Locked rotor torq Breakdown torqu Rated speed	: 2 : 7 : 8 que : 2 : 2 : 1	18.4/24.2 A 7.2 89.4 ft.lb 250 % 260 %	Duty cycle Insulation Service fa Temperat	e ı class actor	: Cont.(S1) : F : 1.15 : 80 K	
Rated current LRC Rated torque Locked rotor torq Breakdown torqu Rated speed Heating constan Cooling constan	: 2 : 7 : 8 que : 2 : 2 : 1	18.4/24.2 A 7.2 189.4 ft.lb 1250 % 1260 %	Duty cycle Insulation Service fa Temperat	e I class actor ure rise	: Cont.(S1) : F : 1.15 : 80 K : B	Date
Rated current LRC Rated torque Locked rotor torq Breakdown torqu Rated speed	: 2 : 7 : 8 que : 2 : 2 : 1	18.4/24.2 A 7.2 89.4 ft.lb 250 % 260 %	Duty cycle Insulation Service fa Temperat	e ı class actor	: Cont.(S1) : F : 1.15 : 80 K	Date
Rated current LRC Rated torque Locked rotor torq Breakdown torqu Rated speed Heating constan Cooling constan Rev.	: 2 : 7 : 8 que : 2 : 2 : 1	18.4/24.2 A 7.2 189.4 ft.lb 1250 % 1260 %	Duty cycle Insulation Service fa Temperat	e I class actor ure rise	: Cont.(S1) : F : 1.15 : 80 K : B	Date
Rated current LRC Rated torque Locked rotor torq Breakdown torqu Rated speed Heating constan Cooling constan	: 2 : 7 : 8 que : 2 : 2 : 1	18.4/24.2 A 7.2 189.4 ft.lb 1250 % 1260 %	Duty cycle Insulation Service fa Temperat	e I class actor ure rise	: Cont.(S1) : F : 1.15 : 80 K : B	Date

Three Phase Induction Motor - Squirrel Cage



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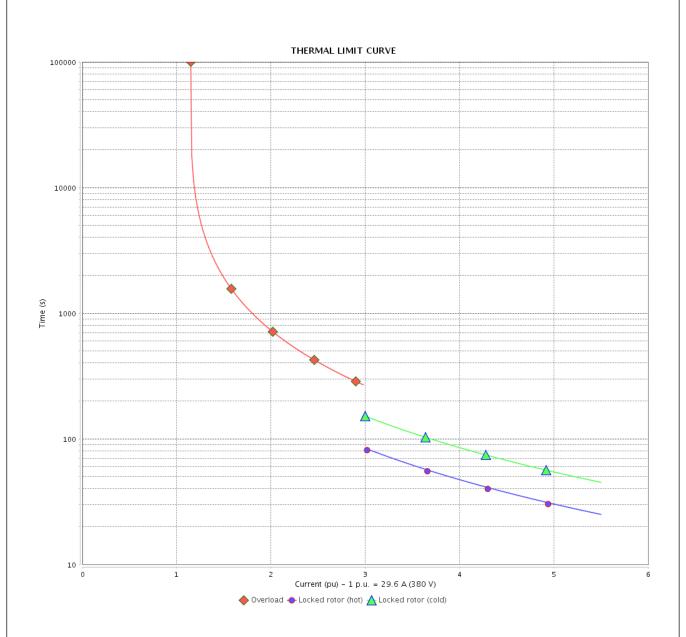


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Product line	: I	NEMA Premium Efficiency ⁻ hase	Three-	Product code :	14407389	
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Performance	. 20	80 V 50 Hz 6P IE1				
Rated current LRC Rated torque Locked rotor tord Breakdown torqu	: 5. : 10 que : 19 ie : 2 ⁷	08 ft.lb 90 % 10 %	Duty cycle Insulation Service fa Temperation	class ctor	: 8.02 sq.ft.lb : Cont.(S1) : F : 1.00 : 80 K	
Rated speed Heating constant		70 rpm	Design		: B	
Cooling constant						
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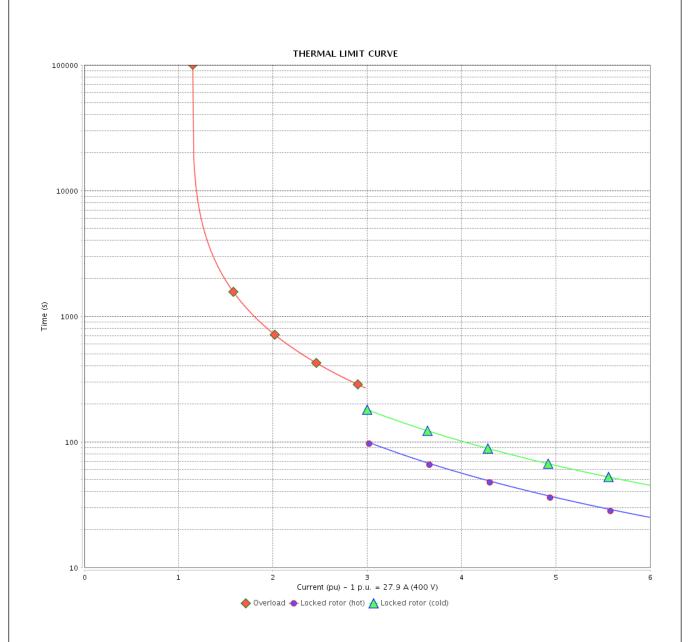


Customer	:					
Product line	: F	NEMA Premium Efficiency hase	Three-	Product code :	14407389	
				Catalog # :	02012XT3E2	286T
Performance	: 4	00 V 50 Hz 6P IE2				
Rated current		7.9 A	Moment of	of inertia (J)	: 8.02 sq.ft.lb	
₋RC Rated torque	: 6 : 1	.0 08 ft.lb	Duty cycle Insulation	e ı class	: Cont.(S1) : F	
_ocked rotor tord	que : 2	00 %	Service fa	actor	: 1.00	
Breakdown torqı Rated speed		29 % 75 rpm	Temperat Design	ure rise	: 80 K : B	
		. • · · · · · · · · · · · · · · · · · ·	Doolgii			
Heating constan Cooling constan						
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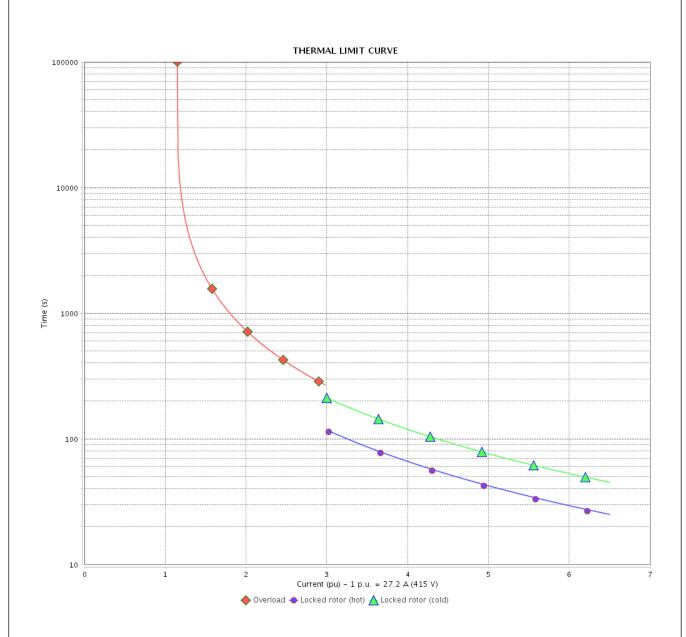


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Product line	: l P	NEMA Premium Efficiency hase		Product code :	14407389	
				Catalog # :	02012XT3E2	86T
Performance	: 4	15 V 50 Hz 6P IE2				
Rated current		7.2 A	Moment o	of inertia (J)	: 8.02 sq.ft.lb	
.RC Rated torque	: 6. : 10	.5 08 ft.lb	Duty cycle Insulation	e class	: Cont.(S1) : F	
ocked rotor tord	que : 22	20 %	Service fa	ector	: 1.00	
Breakdown torqu Rated speed		50 % 75 rpm	Temperat Design	ure rise	: 80 K : B	
Heating constan						
Cooling constant						
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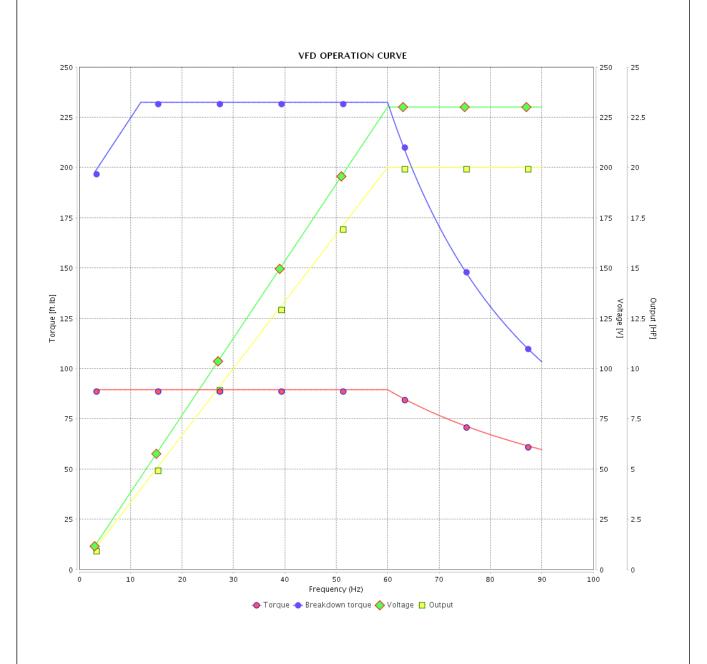
Three Phase Induction Motor - Squirrel Cage



Customer

Product line : NEMA Premium Efficiency Three-Product code: 14407389

Catalog #: 02012XT3E286T



Performance	: 23	30/460 V 60 Hz 6P				
Rated current LRC Rated torque Locked rotor torque Breakdown torque		8.4/24.2 A .2 9.4 ft.lb 50 % 60 %	Moment of Duty cycle Insulation Service fa	class actor	: 8.02 sq.ft.lb : Cont.(S1) : F : 1.15 : 80 K	
Rated speed		175 rpm	Design		: B	
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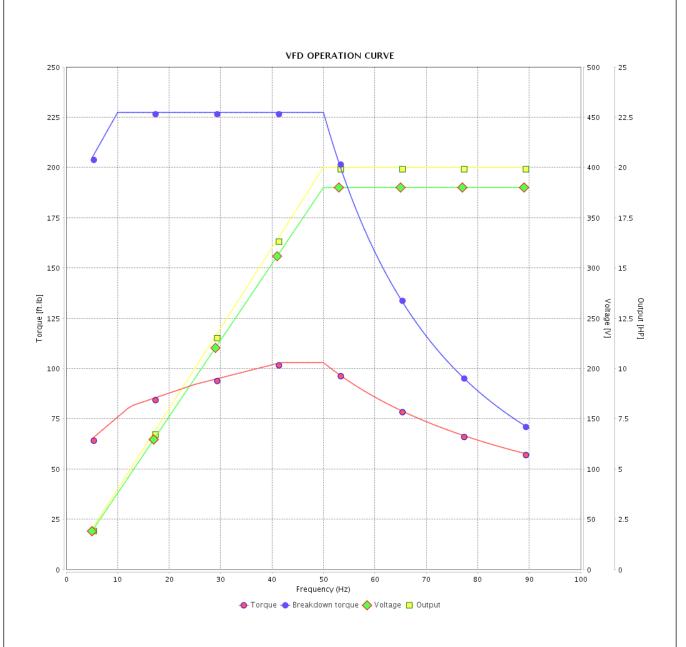
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Product line : NEMA Premium Efficiency Three-

Phase

Product code: 14407389

Catalog #: 02012XT3E286T



Performance : 380 V 50 Hz 6P IE1 Rated current : 29.6 A Moment of inertia (J) : 8.02 sq.ft.lb **LRC** : 5.5 Duty cycle : Cont.(S1) Insulation class : 108 ft.lb : F Rated torque Locked rotor torque : 190 % Service factor : 1.00 Breakdown torque : 210 % Temperature rise : 80 K Rated speed : 970 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by

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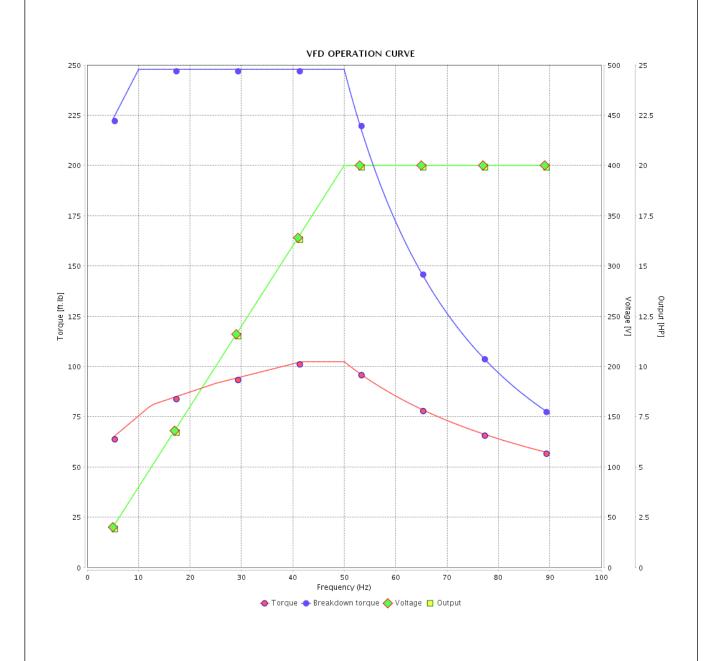
Customer

Product line : NEMA Premium Efficiency Three- Product code :

Phase

Product code: 14407389

Catalog #: 02012XT3E286T



Performance	:	400 V 50 Hz 6P IE2				
Rated current	:	: 27.9 A Moment		f inertia (J)	: 8.02 sq.ft.lb	
LRC	:	6.0	Duty cycle	;	: Cont.(S1)	
Rated torque	:	108 ft.lb	Insulation	class	: F	
Locked rotor torq	ue :	200 %	Service fa	ctor	: 1.00	
Breakdown torqu	e :	229 %	Temperati	ure rise	: 80 K	
Rated speed	:	975 rpm	Design		: B	
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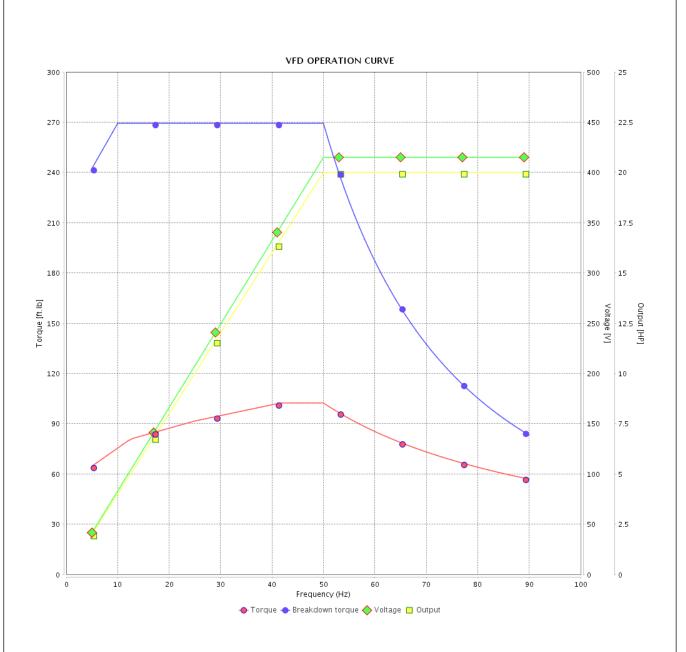
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Product line : NEMA Premium Efficiency Three-

Phase

Product code: 14407389

Catalog #: 02012XT3E286T



Performance : 415 V 50 Hz 6P IE2 : 27.2 A Rated current Moment of inertia (J) : 8.02 sq.ft.lb **LRC** Duty cycle : Cont.(S1) : 6.5 : 108 ft.lb Insulation class : F Rated torque Locked rotor torque : 220 % Service factor : 1.00 Breakdown torque : 250 % Temperature rise : 80 K : 975 rpm Rated speed Design : B Rev. Performed Checked Date **Changes Summary** Performed by

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