### **DATA SHEET**

#### Three Phase Induction Motor - Squirrel Cage



Customer

Product line : JM Pump NEMA Premium Product code: 14808415

Efficiency Three-Phase

Catalog #: 00158ET3E145JM-S

Frame : 143/5JM Cooling method : IC411 - TEFC

Insulation class Mounting : F-1

Duty cycle : Cont.(S1) Rotation<sup>1</sup> : Both (CW and CCW)

1 5

: -20°C to +40°C Ambient temperature Starting method : Direct On Line

1 5

: 1000 m.a.s.l. Approx. weight<sup>3</sup> Altitude : 40.8 lb

: IP55 : 0.1101 sq.ft.lb Protection degree Moment of inertia (J)

: B Design

Output [HP]		1.5	1.5	1.5
Poles		4	4	4
Frequency [Hz]		60	50	50
Rated voltage [V]		230/460	190/380	220/415
Rated current [A]		4.04/2.02	4.82/2.41	4.38/2.32
L. R. Amperes [A]		33.1/16.6	29.4/14.7	29.3/15.5
LRC [A]		8.2x(Code K)	6.1x(Code H)	6.7x(Code J)
No load current [A]	]	2.17/1.08	2.13/1.07	2.20/1.17
Rated speed [RPM	1]	1750	1420	1430
Slip [%]		2.78	5.33	4.67
Rated torque [ft.lb]		4.50	5.55	5.51
Locked rotor torqu	e [%]	270	210	240
Breakdown torque	[%]	300	250	280
Service factor			1.15	1.15
Temperature rise		80 K	105 K	80 K
Locked rotor time		37s (cold) 21s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)
Noise level <sup>2</sup>		52.0 dB(A)	49.0 dB(A)	49.0 dB(A)
	25%	85.2	86.1	85.0
Efficiency (%)	50%	85.5	84.7	84.2
Efficiency (70)	75%	86.5	84.7	84.9
	100%	86.5	82.7	83.6
	25%	0.35	0.41	0.37
Power Factor	50%	0.59	0.67	0.62
I OWEI FACIOI	75%	0.72	0.78	0.75
	100%	0.79	0.84	0.82

Non drive end Drive end Foundation loads

Bearing type 6206 ZZ 6203 ZZ Max. traction : 114 lb Sealing V'Ring Without Max. compression : 154 lb

Bearing Seal

Lubrication interval Lubricant amount Mobil Polyrex EM Lubricant type

Notes

Output [HP]

USABLE @208V 4.47A SF 1.00 SFA 4.47A

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



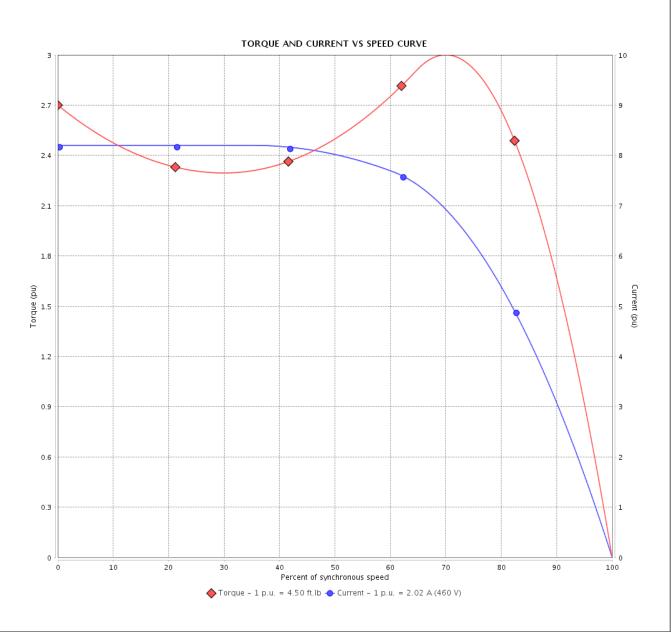
Customer :

Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S



Performance : 230/460 V 60 Hz 4P Rated current : 4.04/2.02 A Moment of inertia (J) : 0.1101 sq.ft.lb **LRC** : 8.2 Duty cycle : Cont.(S1) : F : 4.50 ft.lb Insulation class Rated torque Service factor Locked rotor torque : 270 % : 80 K Breakdown torque : 300 % Temperature rise Rated speed : 1750 rpm Design : B

Locked rotor time : 37s (cold) 21s (hot)

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### TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage Customer Product line : JM Pump NEMA Premium Product code: 14808415 Efficiency Three-Phase Catalog #: 00158ET3E145JM-S TORQUE AND CURRENT VS SPEED CURVE 2.7 2.1 Torque (bu) 1.2 0.6 0.3 40 50 Percent of synchronous speed ◆ Torque - 1 p.u. = 5.55 ft.lb ◆ Current - 1 p.u. = 2.41 A (380 V)

Performance	: 190/380 V 50 Hz 4P			
Rated current	: 4.82/2.41 A	Moment of inertia (J)	: 0.1101 sq.ft.lb	
LRC	: 6.1	Duty cycle	: Cont.(S1)	
Rated torque	: 5.55 ft.lb	Insulation class	:F	
Locked rotor torque	: 210 %	Service factor	: 1.15	
Breakdown torque	: 250 %	Temperature rise	: 105 K	
Rated speed	: 1420 rpm	Design	: B	
Locked rotor time	: 0s (cold) 0s (hot)	,		

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### TORQUE AND CURRENT VS SPEED CURVE

#### Three Phase Induction Motor - Squirrel Cage



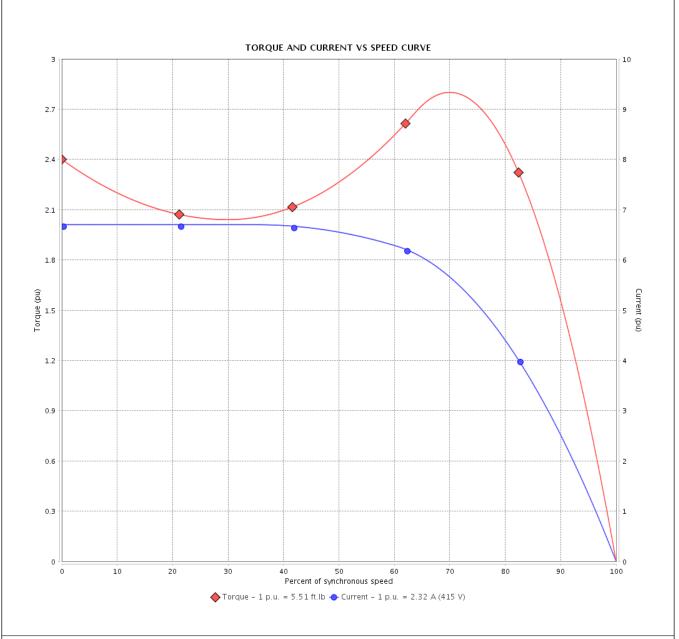
Customer :

Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S



Performance : 220/415 V 50 Hz 4P Rated current : 4.38/2.32 A Moment of inertia (J) : 0.1101 sq.ft.lb **LRC** : 6.7 Duty cycle : Cont.(S1) : F : 5.51 ft.lb Insulation class Rated torque Service factor Locked rotor torque : 240 % : 1.15 Breakdown torque : 280 % Temperature rise : 80 K Rated speed : 1430 rpm Design : B

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

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## LOAD PERFORMANCE CURVE

### Three Phase Induction Motor - Squirrel Cage



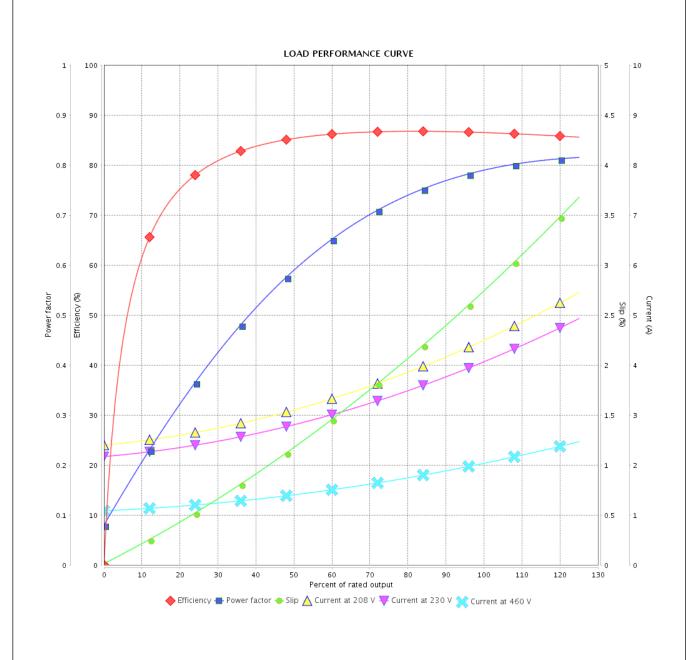
Customer

Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S



Performance	: 2	: 230/460 V 60 Hz 4P				
Rated current	: 4	1.04/2.02 A	Moment o	f inertia (J)	: 0.1101 sq.ft.lb	
LRC	: 8	3.2	Duty cycle	<b>:</b>	: Cont.(S1)	
Rated torque	: 4	1.50 ft.lb	Insulation	class	: F	
Locked rotor torque	e :2	270 %	Service fa	ctor	:	
Breakdown torque		300 %	Temperati	Temperature rise		
Rated speed	: ′	1750 rpm	Design		: B	
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## LOAD PERFORMANCE CURVE

### Three Phase Induction Motor - Squirrel Cage



Customer :

Checked by

Date

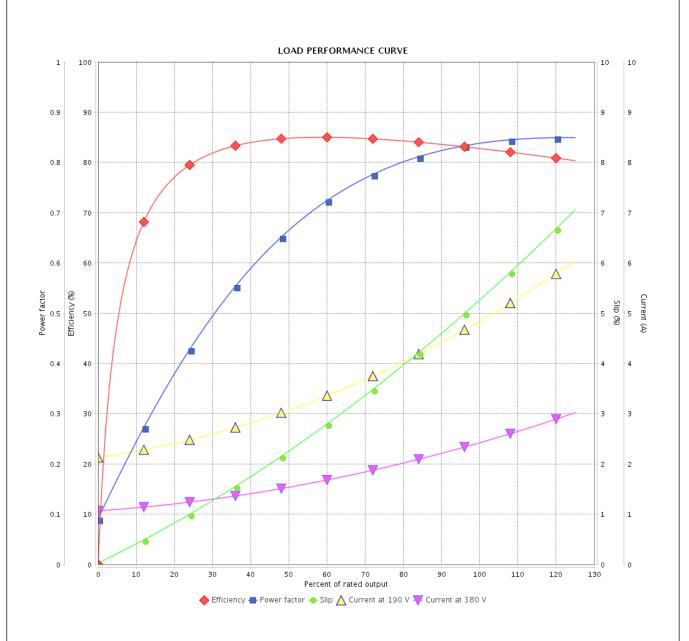
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Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S



Performance	: 190/380 V 50 Hz 4P				
Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed	: 4.82/2.41 A : 6.1 : 5.55 ft.lb : 210 % : 250 % : 1420 rpm	Moment of Duty cycle Insulation Service fa Temperate Design	class ector	: 0.1101 sq.ft.lt : Cont.(S1) : F : 1.15 : 105 K : B	)
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## LOAD PERFORMANCE CURVE

### Three Phase Induction Motor - Squirrel Cage



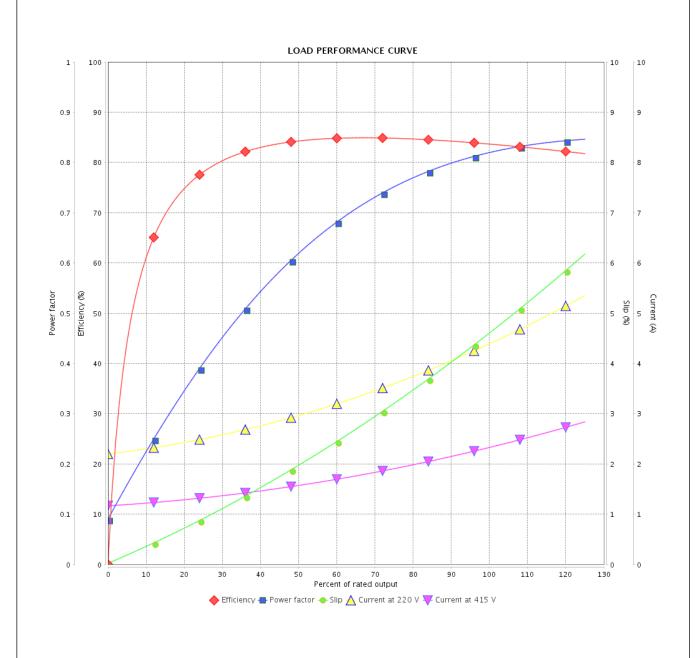
Customer

Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S



Performance	: 22	20/415 V 50 Hz 4P					
Rated current	: 4.	38/2.32 A	Moment of	of inertia (J)	: 0.1101 sq.ft.	lb	
LRC	: 6.	.7	Duty cycle	Э	: Cont.(S1)		
Rated torque	: 5.	.51 ft.lb	Insulation	class	: F		
Locked rotor torq	ue : 24	40 %	Service fa	actor	: 1.15		
Breakdown torqu	e : 28	280 % Temperature rise		: 280 % Temperature rise : 8		: 80 K	
Rated speed	: 14	430 rpm	Design		: B		
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### Three Phase Induction Motor - Squirrel Cage

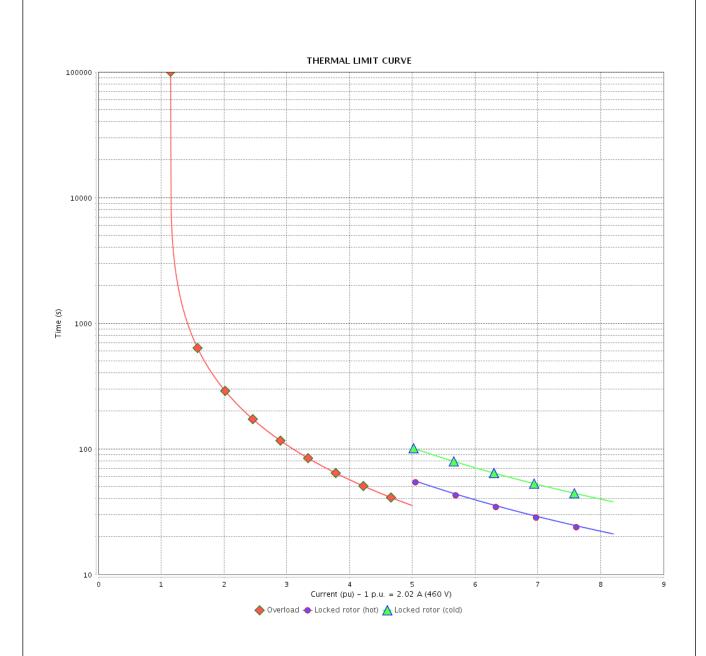


Customer		:				
Product line		: JM Pump NEMA Premium Efficiency Three-Phase		Product code :	14808415	
		Emolericy Trifee Triase		Catalog # :	00158ET3E1	45JM-S
Performance	:	230/460 V 60 Hz 4P				
Rated current		4.04/2.02 A	Moment o	f inertia (J)	: 0.1101 sq.ft.ll	b
LRC Rated torque		8.2 4.50 ft.lb	Duty cycle Insulation		: Cont.(S1) : F	
Locked rotor tord	que :	270 %	Service fa	ctor	:	
Breakdown torqu		300 %	Temperatu	ıre rise	: 80 K : B	
Rated speed		1750 rpm	Design		. Б	
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### Three Phase Induction Motor - Squirrel Cage



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### Three Phase Induction Motor - Squirrel Cage

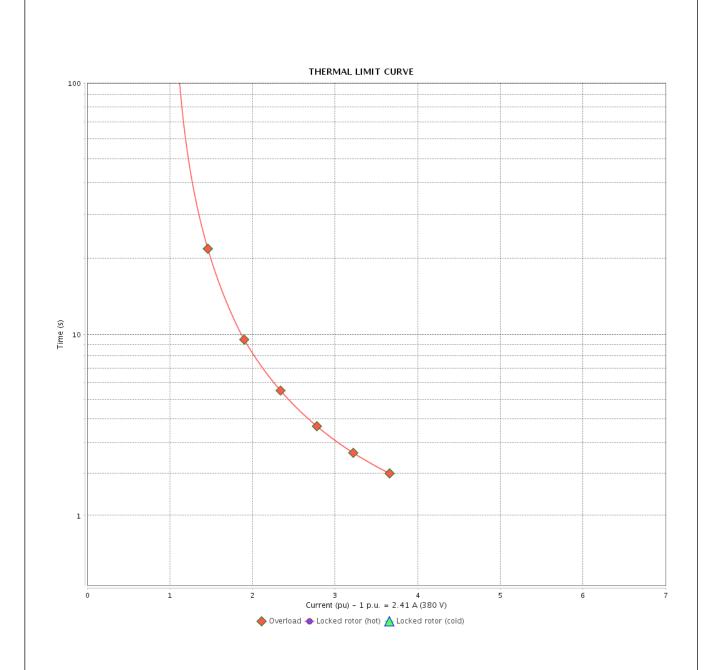


Customer	:				
Product line	: JM Pump NEMA Premiun Efficiency Three-Phase		Product code : Catalog # :	14808415 00158ET3E1	45JM-S
Performance	: 190/380 V 50 Hz 4P				
Rated current LRC	: 4.82/2.41 A : 6.1	Moment o	f inertia (J)	: 0.1101 sq.ft.l : Cont.(S1)	b
Rated torque	: 5.55 ft.lb	Insulation	class	: F	
Locked rotor torque Breakdown torque	: 210 % : 250 %	Service fa Temperatu		: 1.15 : 105 K	
Rated speed	: 1420 rpm	Design	are rise	: 105 K : B	
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Cooling constant					
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### Three Phase Induction Motor - Squirrel Cage



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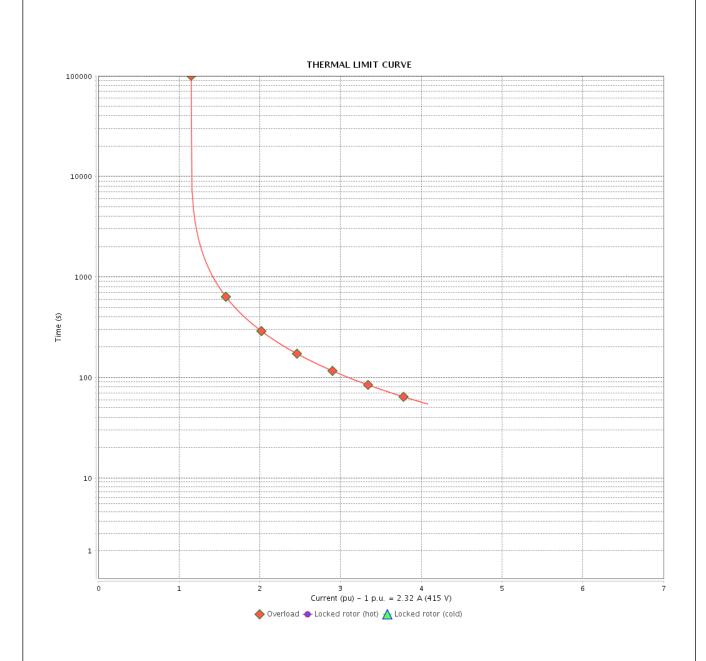


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Product line	:.	JM Pump NEMA Premium fficiency Three-Phase	I	Product code :	14808415	
	_	inciency Three-Phase	(	Catalog # :	00158ET3E1	45JM-S
Performance		20/415 V 50 Hz 4P	<b>N</b> 4	***********	0.4404 6.11	
Rated current LRC	: 4. : 6.	38/2.32 A 7	Moment of Duty cycle	f inertia (J)	: 0.1101 sq.ft.ll : Cont.(S1)	0
Rated torque	: 5.	51 ft.lb	Insulation	class	: F	
Locked rotor torq Breakdown torqu		40 % 80 %	Service far Temperatu		: 1.15 : 80 K	
Rated speed		430 rpm	Design		: B	
Heating constant						
Cooling constant						
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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 :

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Date

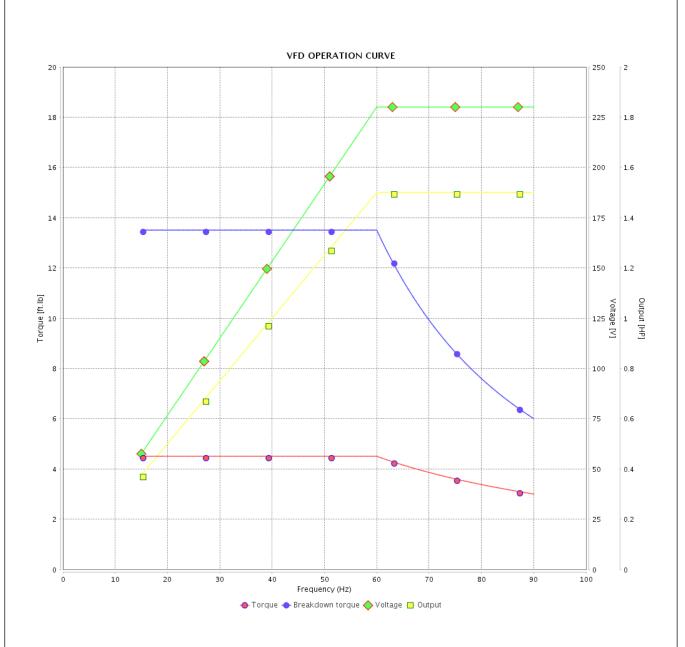
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Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S



Performance		: 230/460 V 60 Hz 4P						
Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed		: 4.04/2.02 A : 8.2 : 4.50 ft.lb : 270 % : 300 % : 1750 rpm	Duty cycle Insulation Service fa	Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design		: 0.1101 sq.ft.lb : Cont.(S1) : F : : 80 K : B		
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## VFD OPERATION CURVE

### Three Phase Induction Motor - Squirrel Cage



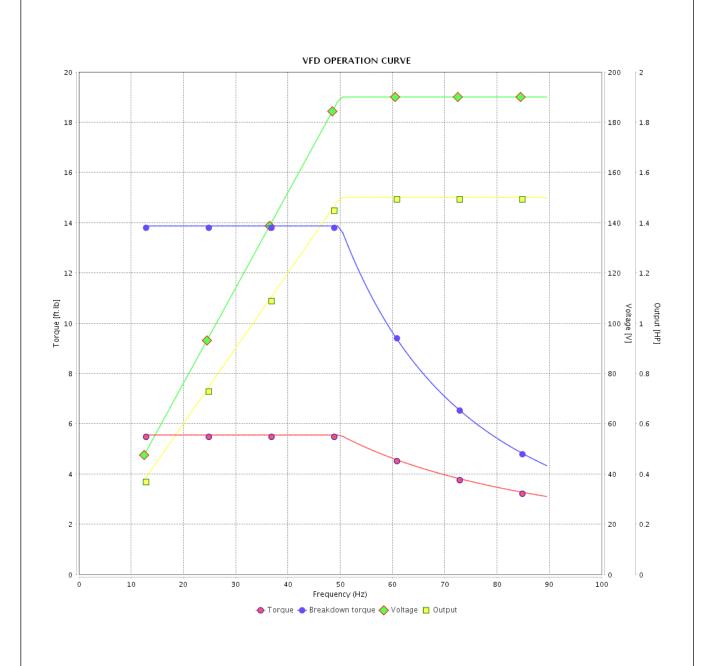
Customer

Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S



Performance : 1		190/380 V 50 Hz 4P					
Rated current :		.82/2.41 A	Moment of inertia (J)		: 0.1101 sq.ft.lb		
LRC : 6.		5.1	Duty cycle	Duty cycle			
Rated torque : 5		5.55 ft.lb	Insulation class		: F		
Locked rotor torque : 2		10 %	Service fa	Service factor		: 1.15	
Breakdown torque		250 %	Temperature rise		: 105 K		
Rated speed	: 1	420 rpm	Design		: B		
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## VFD OPERATION CURVE

#### Three Phase Induction Motor - Squirrel Cage



Customer :

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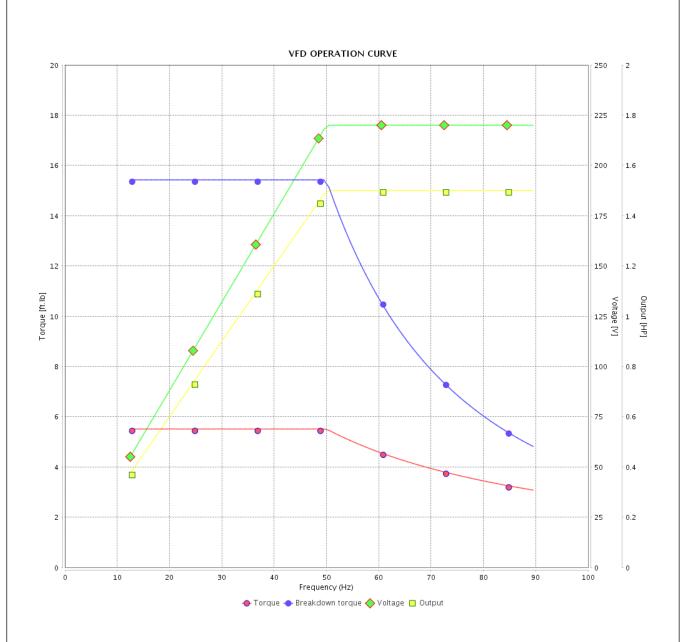
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Product line : JM Pump NEMA Premium

Efficiency Three-Phase

Product code: 14808415

Catalog #: 00158ET3E145JM-S

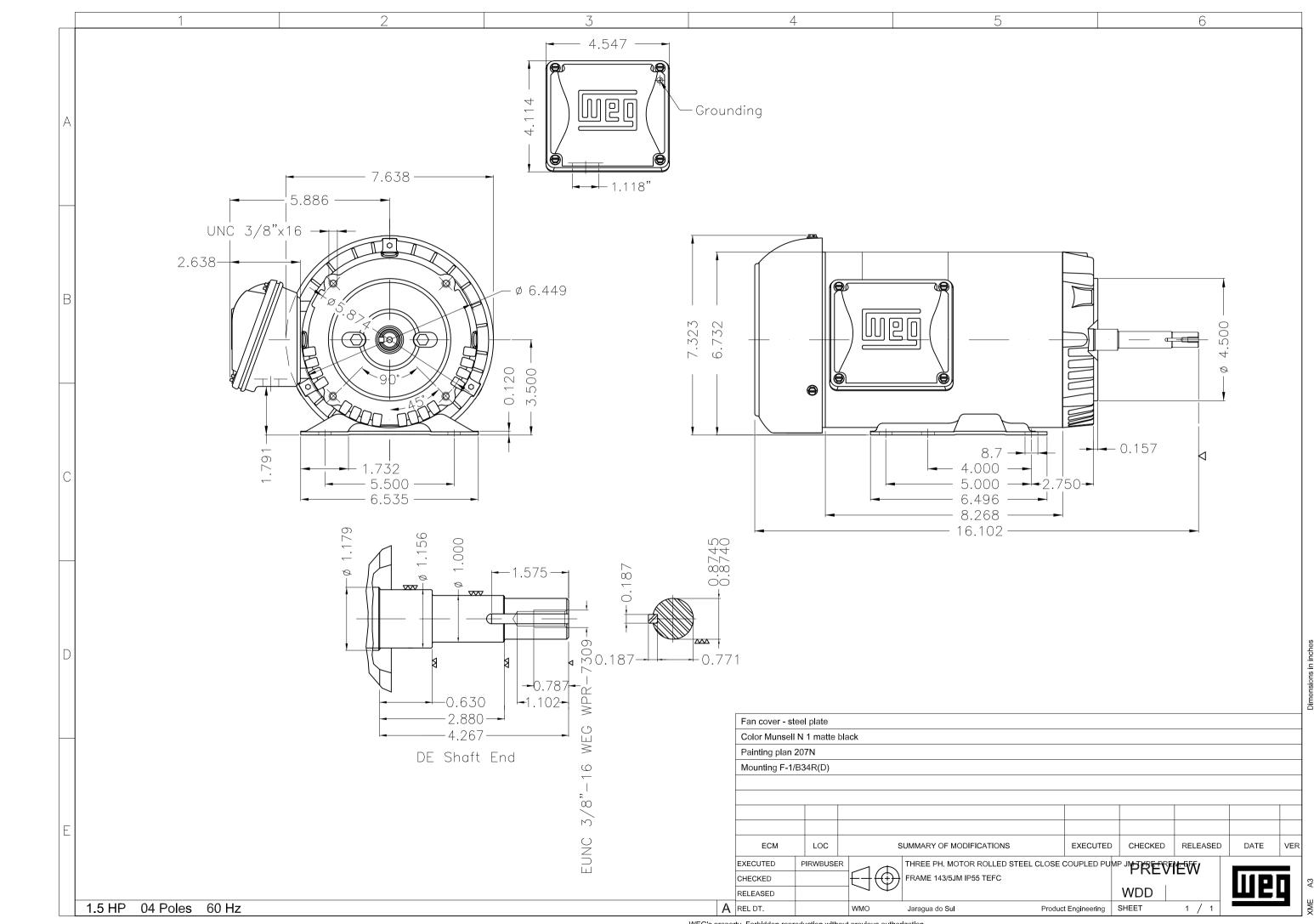


Performance : 220/415 V 50 Hz 4P Rated current : 4.38/2.32 A Moment of inertia (J) : 0.1101 sq.ft.lb **LRC** : 6.7 Duty cycle : Cont.(S1) Insulation class Rated torque : 5.51 ft.lb : F Locked rotor torque : 240 % Service factor : 1.15 Breakdown torque : 280 % Temperature rise : 80 K Rated speed : 1430 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by

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FOR SAFE AREA

(**UL)**US LISTED 3PT9

**&** Energy Verifi

> MODEL 00158ET3E145JM-S N01.TE0IC0X0N 14808415 MADE IN BRAZIL )6APR2022

For 60Hz: Class I, Zone 2, IIC Class I, DIv.2, Gr. A,B,C,D - T3 Div 2 Inverter Duty (SF1.00) CT 2:1/VT 1000:1

> 8 걒 143/5.IM CONT

P55 CODE SHO F AT 80K

TEFC <del>0</del>

1.65/2.32

1000 m.a.s.l

NSC

1.15

SABLE @ 208V 4.47A ALTERNATE RATING:

SF1.00 INC. W

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT. 4:1 CT 1.5HP 4.82-4.28/2.41-2.27A

IEC 60034-1

SF1.15

190-220/380-415V

86.5%

NOM EFF NEMA

ZPM 3FA 냃 쌆

**EFF 82.7%** 

1420RPM 50 Hz 8203-ZZ 9

ODE

8206-ZZ

牌

2

MOBIL POLYREX EM

13-ORG 1-810 I7-PNK F5-BLK







NTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION

shocks. Disconnect power source before servicing unit. WARNING: Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical

choc électrique grave. Déconnectez l'alimentation ayant l'entretien de la machine. conformément aux codes électriques locaux et nationaux afin d'éviter tout AVERTISSEMENT: Le moteur doit être mis à la terre