DATA SHEET

Three Phase Induction Motor - Squirrel Cage



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Product line : JP Pump NEMA Premium Product code : 12682711

Efficiency Three-Phase

Catalog #: 00156OT3E143JP-S Frame : 143/5JP Cooling method : IC01 - ODP Insulation class 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 : 32.6 lb Moment of inertia (J) Design : B : 0.0835 sq.ft.lb Output [HP] 1.5 1.5 1.5 Poles 2 2 2 60 50 50 Frequency [Hz] Rated voltage [V] 230/460 220/415 190/380 Rated current [A] 3.70/1.85 4.40/2.20 4.02/2.13 L. R. Amperes [A] 31.8/15.9 29.5/14.7 29.7/15.8 LRC [A] 8.6x(Code K) 6.7x(Code H) 7.4x(Code J) No load current [A] 1.62/0.809 1.59/0.796 1.66/0.881 Rated speed [RPM] 3510 2890 2900 Slip [%] 2.50 3.67 3.33 Rated torque [ft.lb] 2.24 2.73 2.72 Locked rotor torque [%] 210 180 200 330 250 280 1.15 1.15

Breakdown torque [%] Service factor Temperature rise 80 K 80 K 80 K 0s (cold) 0s (hot) 0s (cold) 0s (hot) Locked rotor time 34s (cold) 19s (hot) Noise level² 62.0 dB(A) 60.0 dB(A) 60.0 dB(A) 25% 81.1 83.2 82.1 50% 81.5 82.7 81.9 Efficiency (%) 75% 84.0 83.6 83.5 100% 84.0 82.7 82.9 25% 0.45 0.47 0.51 50% 0.73 0.79 0.75

0.88

100% 0.89 0.92

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

0.83

Bearing type : 6206 ZZ 6203 ZZ Max. traction : 50 lb Sealing : Without Without Max. compression : 82 lb

Bearing Seal Bearing Seal Lubrication interval : - -

Lubricant amount : - Lubricant type : Mobil Polyrex EM

Notes

Power Factor

USABLE @208V 4.09A SF 1.00 SFA 4.09A

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.

0.85

0.90

| (1) / 100 / 00 / 10 | iouu. | | | | |
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



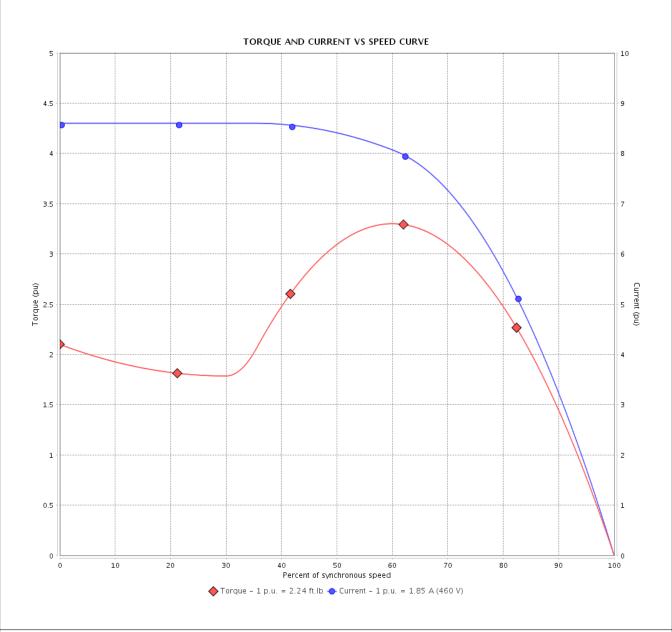
Customer

Product line : JP Pump NEMA Premium

Efficiency Three-Phase

Product code: 12682711

Catalog #: 00156OT3E143JP-S



Performance : 230/460 V 60 Hz 2P Rated current : 3.70/1.85 A Moment of inertia (J) : 0.0835 sq.ft.lb **LRC** : 8.6 Duty cycle : Cont.(S1) : F : 2.24 ft.lb Insulation class Rated torque : 210 % Service factor Locked rotor torque : 80 K Breakdown torque : 330 % Temperature rise Rated speed : 3510 rpm Design : B Locked rotor time : 34s (cold) 19s (hot)

| Rev. | | Changes Summary | Performed | Checked | Date |
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| Date | 12/04/2022 | | | 2/ | |

TORQUE AND CURRENT VS SPEED CURVE



Revision

Page

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Three Phase Induction Motor - Squirrel Cage Customer Product line : JP Pump NEMA Premium Product code: 12682711 Efficiency Three-Phase Catalog #: 00156OT3E143JP-S 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. = 2.73 ft.lb ◆ Current - 1 p.u. = 2.20 A (380 V) Performance : 190/380 V 50 Hz 2P Rated current : 4.40/2.20 A Moment of inertia (J) : 0.0835 sq.ft.lb **LRC** : 6.7 Duty cycle : Cont.(S1) Insulation class : F Rated torque : 2.73 ft.lb Locked rotor torque : 180 % Service factor : 1.15 Breakdown torque : 250 % Temperature rise : 80 K Rated speed : 2890 rpm Design : B Locked rotor time : 0s (cold) 0s (hot) Date Rev. **Changes Summary** Performed Checked

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Date

12/04/2022

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



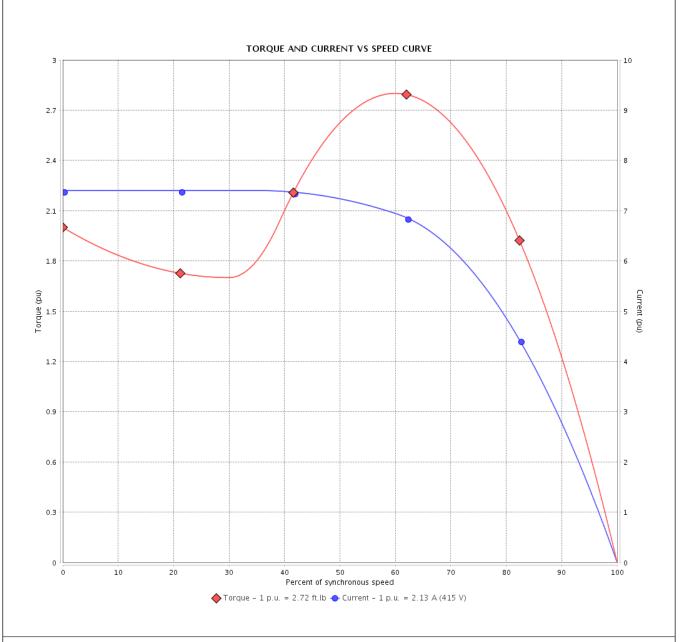
Customer :

Product line : JP Pump NEMA Premium

Efficiency Three-Phase

Product code: 12682711

Catalog #: 00156OT3E143JP-S



Performance : 220/415 V 50 Hz 2P Rated current : 4.02/2.13 A Moment of inertia (J) : 0.0835 sq.ft.lb **LRC** : 7.4 Duty cycle : Cont.(S1) : F : 2.72 ft.lb Insulation class Rated torque Service factor Locked rotor torque : 200 % : 1.15 Breakdown torque : 280 % Temperature rise : 80 K Rated speed : 2900 rpm Design : B

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

| Rev. | | Changes Summary | Performed | Checked | Date |
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



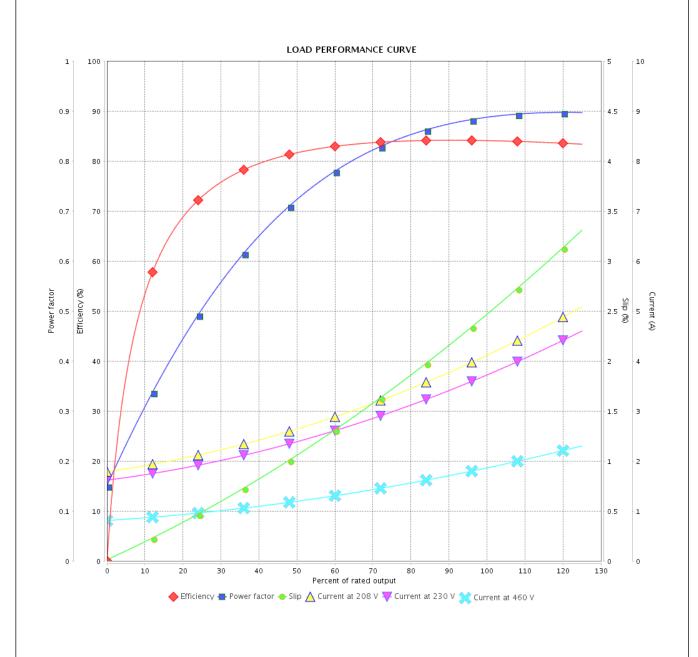
Customer

Product line : JP Pump NEMA Premium Prod

Efficiency Three-Phase

Product code: 12682711

Catalog #: 00156OT3E143JP-S



| Performance | : | 230/460 V 60 Hz 2P | | | | |
|------------------------|-----------------------------|--------------------|------------------|-----------------------|-------------|----------|
| Rated current | Rated current : 3.70/1.85 A | | Moment o | Moment of inertia (J) | | lb |
| LRC | : | 8.6 | Duty cycle | | : Cont.(S1) | |
| Rated torque | : | 2.24 ft.lb | Insulation class | | : F | |
| Locked rotor torque | e : | 210 % | Service factor | | : | |
| Breakdown torque | | 330 % | Temperature rise | | : 80 K | |
| Rated speed : 3510 rpm | | 3510 rpm | Design | | : B | |
| Rev. | | Changes Summary | | Performed | Checked | Date |
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| Date | 12/04/2022 | | | | 5 / | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Date

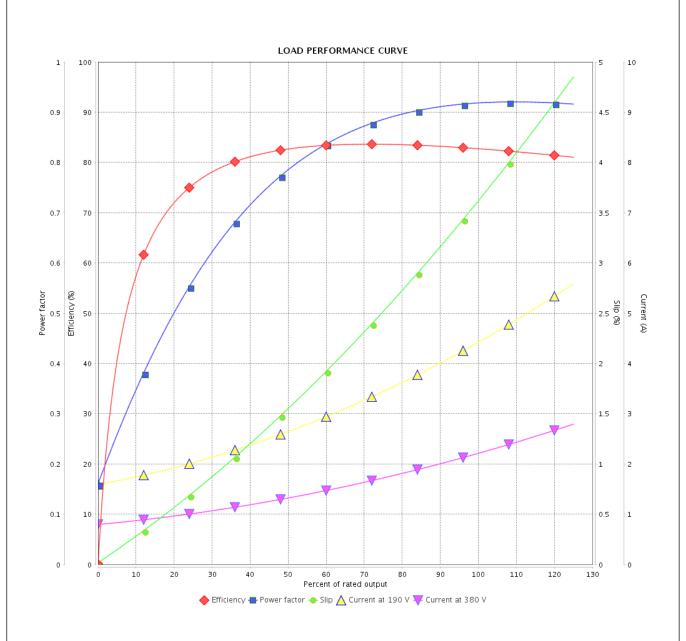
12/04/2022

Product line : JP Pump NEMA Premium

Efficiency Three-Phase

Product code: 12682711

Catalog #: 00156OT3E143JP-S



Performance : 190/380 V 50 Hz 2P Rated current : 4.40/2.20 A Moment of inertia (J) : 0.0835 sq.ft.lb **LRC** : 6.7 Duty cycle : Cont.(S1) Insulation class Rated torque : 2.73 ft.lb : F Locked rotor torque : 180 % Service factor : 1.15 Breakdown torque : 250 % Temperature rise : 80 K Rated speed : 2890 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by Checked by Page Revision

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



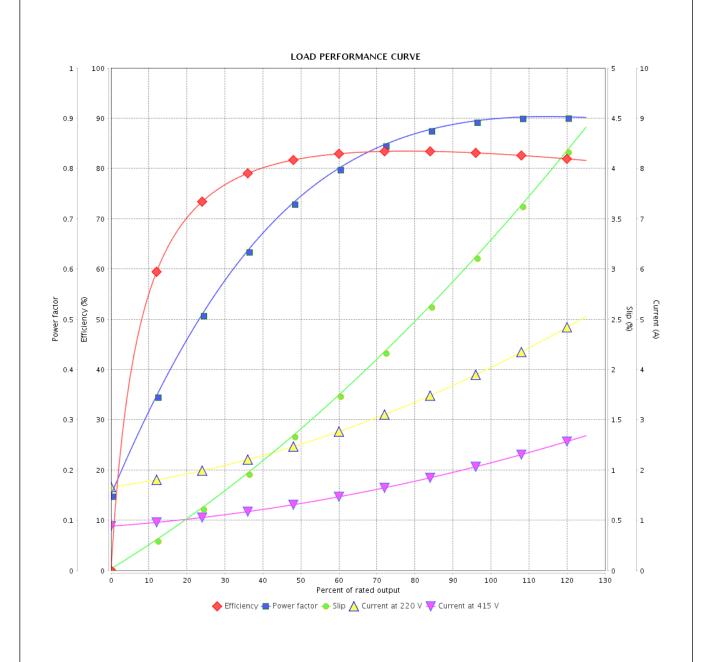
Customer

Product line : JP Pump NEMA Premium

Efficiency Three-Phase

Product code: 12682711

Catalog #: 00156OT3E143JP-S



| Performance | : 2 | 20/415 V 50 Hz 2P | | | | |
|--------------------|--|-------------------------------|------------------|---------------|-------------------------------|----------|
| Rated current | : 4 | : 4.02/2.13 A Moment of inert | | f inertia (J) | inertia (J) : 0.0835 sq.ft.lb | |
| LRC | : 7.4 Duty cycle | | : Cont.(S1) | | | |
| Rated torque | : 2 | .72 ft.lb | Insulation class | | : F | |
| Locked rotor torqu | ıe : 2 | 00 % | Service factor | | : 1.15 | |
| Breakdown torque | reakdown torque : 280 % Temperature rise | | ıre rise | : 80 K | | |
| Rated speed | ated speed : 2900 rpm | | Design | | : B | |
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| Date | 12/04/2022 | | | | 7 / | |

Three Phase Induction Motor - Squirrel Cage

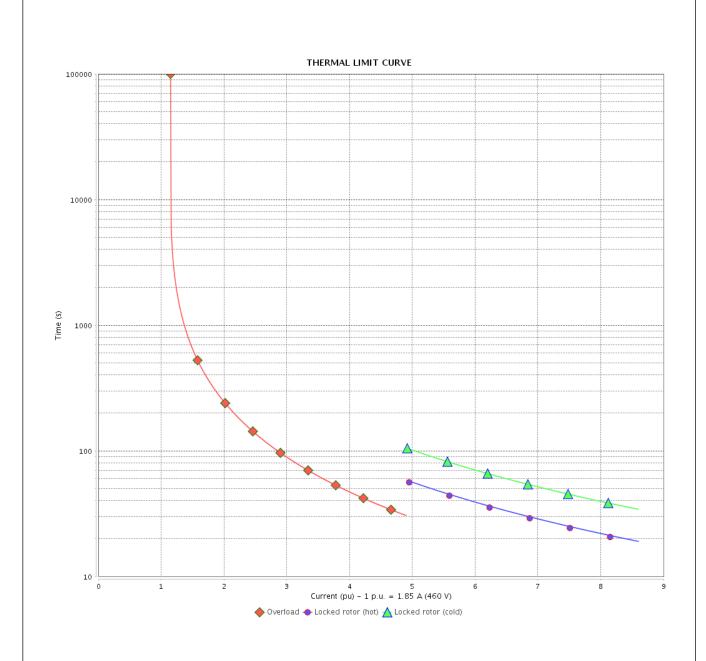


| Customer | : | | | | | |
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| Product line | | JP Pump NEMA Premium | | Product code : | 12682711 | |
| | E | fficiency Three-Phase | | | | 140 ID O |
| | | | | Catalog # : | 00156OT3E1 | 14337-3 |
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| Performance | . 2 | 30/460 V 60 Hz 2P | | | | |
| Rated current | | .70/1.85 A | Moment of | f inertia (J) | : 0.0835 sq.ft.l | b |
| LRC | : 8 | .6 | Duty cycle | ; | : Cont.(S1) | |
| Rated torque Locked rotor torq | | .24 ft.lb 10 % | Insulation Service fa | | : F : | |
| Breakdown torqu | ie : 3 | 30 % | Temperatu | | : 80 K | |
| Rated speed | | 510 rpm | Design | | : B | |
| Heating constant | | | | | | |
| Cooling constant Rev. | | Changes Summary | | Performed | Checked | Date |
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Three Phase Induction Motor - Squirrel Cage



Customer



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Three Phase Induction Motor - Squirrel Cage

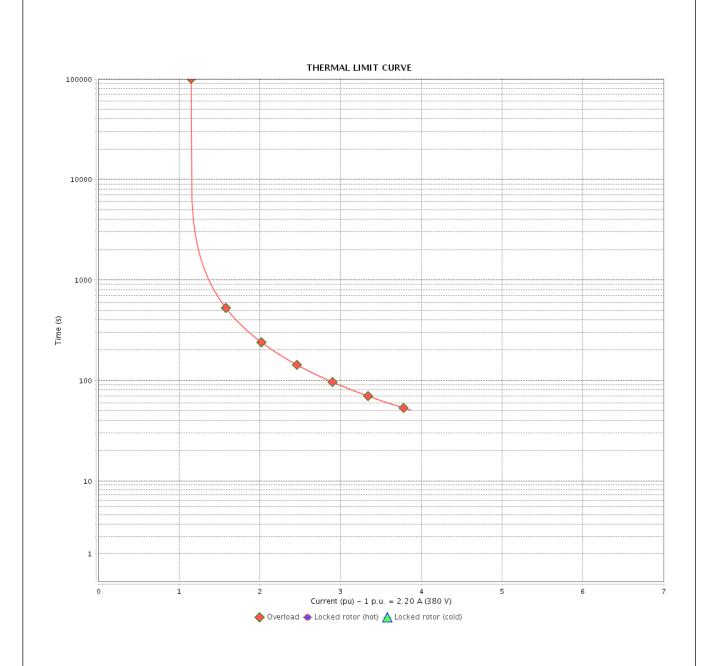


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| | | | | | | |
| Product line | :. | JP Pump NEMA Premium | ı | Product code : | 12682711 | |
| | E· | fficiency Three-Phase | cy Three-Phase Catalog # | | 00156OT3E1 | I43JP-S |
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| 5 | | 20/2021/ 52 11 25 | | | | |
| Performance | | 90/380 V 50 Hz 2P 40/2.20 A | Moment | finartia (I) | · 0.0925.og.ft.l | h |
| Rated current LRC | : 6. | 7 | Moment of Duty cycle | | : 0.0835 sq.ft.l : Cont.(S1) | υ |
| Rated torque | | 73 ft.lb | Insulation | class | : F | |
| Locked rotor tord Breakdown torqu | | 30 % 50 % | Service fac Temperatu | | : 1.15 : 80 K | |
| Rated speed | | 390 rpm | Design | | : B | |
| Heating constant | <u> </u> | | | | | |
| Cooling constant | | | | | | |
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Three Phase Induction Motor - Squirrel Cage



Customer



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Three Phase Induction Motor - Squirrel Cage

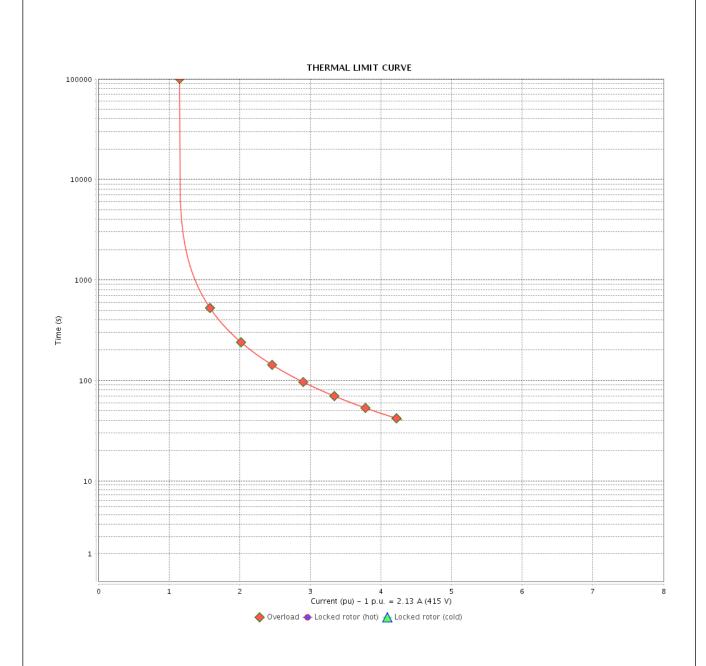


| Customer | | : | | | | |
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| | | | | | | |
| Product line | | : JP Pump NEMA Premium Efficiency Three-Phase | | Product code : | 12682711 | |
| | | Linciency Timee-i mase | | Catalog # : | 00156OT3E | I43JP-S |
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| Performance | | : 220/415 V 50 Hz 2P | | | | |
| Rated current | | : 4.02/2.13 A | Moment o | of inertia (J) | : 0.0835 sq.ft.l | b |
| LRC Rated torque | | : 7.4 : 2.72 ft.lb | Duty cycle Insulation | | : Cont.(S1) : F | |
| Locked rotor tord | | : 200 % | Service fa | | : 1.15 | |
| Breakdown torqu | ue : | : 280 % | Temperat | ure rise | : 80 K | |
| Rated speed | | : 2900 rpm | Design | | : B | |
| Heating constant | | | | | | |
| Cooling constant Rev. | <u> </u> | Changes Summary | | Performed | Checked | Date |
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| Date | 12/04/2022 | | | | 12 / | |

Three Phase Induction Motor - Squirrel Cage



Customer



| Rev. | | Changes Summary | Performed | Checked | Date |
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| Date | 12/04/2022 | | | 13 / | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



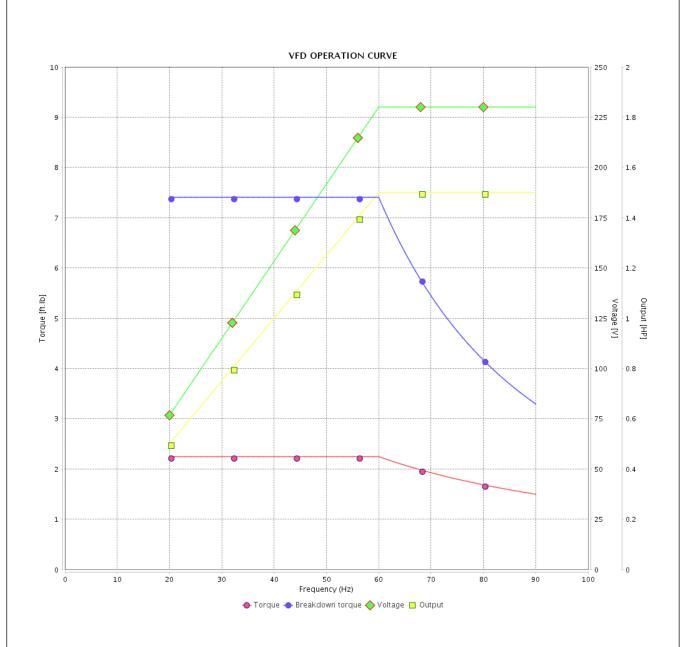
Customer :

Product line : JP Pump NEMA Premium

Efficiency Three-Phase

Product code: 12682711

Catalog #: 00156OT3E143JP-S

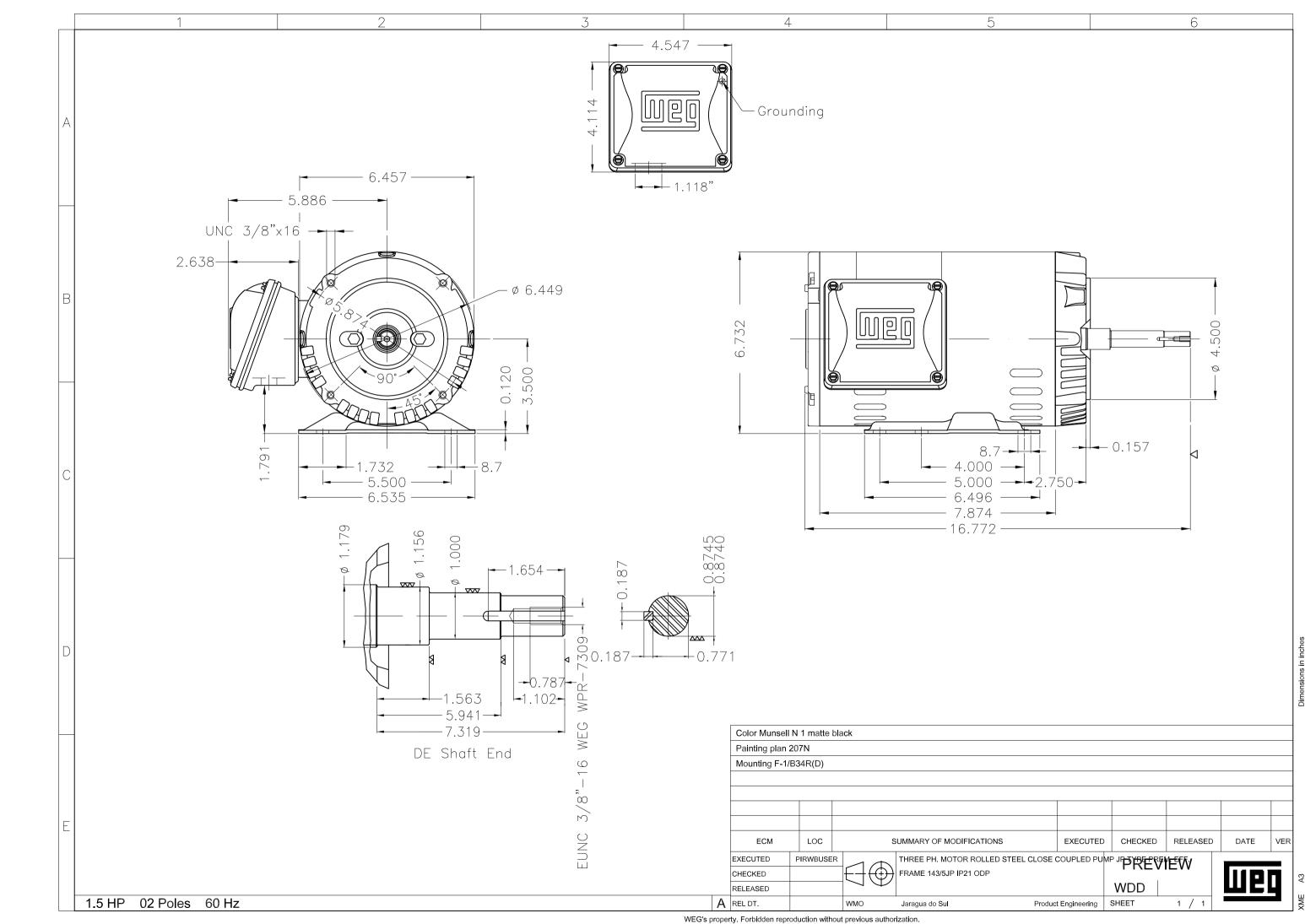


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|---|---|--|---|---------------|---|----------|
| Performance | | : 230/460 V 60 Hz 2F | | | | |
| Rated current LRC Rated torque Locked rotor tord Breakdown torqu Rated speed | • | : 3.70/1.85 A : 8.6 : 2.24 ft.lb : 210 % : 330 % : 3510 rpm | Moment of Duty cycle Insulation Service fa Temperatu Design | class ctor | : 0.0835 sq.ft. : Cont.(S1) : F : : 80 K : B | lb |
| Rev. | | Changes Summa | ıry | Performed | Checked | Date |
| Performed by Checked by | | | | | Page | Revision |

14/

12/04/2022

Date





ENCL ř DES 40°C CONT 3510 CODE PUTY **PM** 1.5(1.1)

HP(kW)

143/5JP

H

4.25/2.13

SFA

3.70/1.85

MODEL 001560T3E143JP-S

11SET2019 쏦 230/460

W01.TO0IC0X0N

9

190-220/380-415V SF1.00 4.09A 84.0% 80K AMB NEMA NOM.EFF. USABLE @ 208V 50Hz 1.5HP INS CL F AT

9

(IE3) **EFF 82.7%** Ω 2890RPM

4.40-3.94/2.20-2.09A

2

ALTERNATE RATING:

m.a.s.l.

1000

0.89 SF 1.15

IEC 60034-1 SF1.15

r3-org 1-81 F5-BLK

F2-WHT

T8-RED

17-PNK

r9-RED

T6-GRY T4-YEL

> NTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION 6203-ZZ ODE

duty motor For 80Hz use on VPWM 1000:1 VT, 3:1 CT WARNING: Motor must be grounded in accordance with local and national MOBIL POLYREX EM nverter 5206-ZZ

electrical codes to prevent serious electrical shocks. Disconnect power AVERTISSEMENT: Le moteur doit être mis à la terre conformément sux codes électriques locaux et nationaux afin d'éviter tout choc source before servicing unit.

électrique grave. Déconnectez l'allmentation avant l'entretien de la machine