

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|  |   |  |                     |          |
|--|---|--|---------------------|----------|
| Customer :   |   |  |                     |          |
| Product line   | : JM Pump NEMA Premium Efficiency Three-Phase           | Product code :   | 12676980            |          |
|  |   | Catalog # :  | 00718OT3E213JM-S    |          |
| Frame  | : 213/5JM   | Cooling method   | : IC01 - ODP        |          |
| Insulation class   | : F   | Mounting   | : F-1               |          |
| Duty cycle   | : Cont.(S1)   | Rotation <sup>1</sup>  | : Both (CW and CCW) |          |
| Ambient temperature  | : -20°C to +40°C  | Starting method  | : Direct On Line    |          |
| Altitude   | : 1000 m.a.s.l.   | Approx. weight <sup>2</sup>  | : 127 lb            |          |
| Design   | : B   | Moment of inertia (J)  | : 1.03 sq.ft.lb     |          |
| Output [HP]  | 7.5   | 7.5  | 7.5                 |          |
| Poles  | 4   | 4  | 4                   |          |
| Frequency [Hz]   | 60  | 50   | 50                  |          |
| Rated voltage [V]  | 230/460   | 190/380  | 220/415             |          |
| Rated current [A]  | 18.5/9.25   | 22.2/11.1  | 20.0/10.6           |          |
| L. R. Amperes [A]  | 133/66.6  | 129/64.4   | 130/68.9            |          |
| LRC [A]  | 7.2x(Code H)  | 5.8x(Code G)   | 6.5x(Code H)        |          |
| No load current [A]  | 8.79/4.39   | 8.64/4.32  | 8.88/4.71           |          |
| Rated speed [RPM]  | 1770  | 1455   | 1460                |          |
| Slip [%]   | 1.67  | 3.00   | 2.67                |          |
| Rated torque [ft.lb]   | 22.3  | 27.1   | 27.0                |          |
| Locked rotor torque [%]  | 240   | 170  | 190                 |          |
| Breakdown torque [%]   | 320   | 229  | 250                 |          |
| Service factor   | 1.15  | 1.15   | 1.15                |          |
| Temperature rise   | 80 K  | 80 K   | 80 K                |          |
| Locked rotor time  | 23s (cold) 13s (hot)                                    | 0s (cold) 0s (hot)   | 0s (cold) 0s (hot)  |          |
| Noise level <sup>2</sup>   | 59.0 dB(A)  | 56.0 dB(A)   | 56.0 dB(A)          |          |
| Efficiency (%)   | 25%   | 88.6   | 89.6                |          |
|  | 50%   | 89.5   | 88.9                |          |
|  | 75%   | 90.2   | 88.5                |          |
|  | 100%  | 91.0   | 87.4                |          |
| Power Factor   | 25%   | 0.39   | 0.42                |          |
|  | 50%   | 0.65   | 0.69                |          |
|  | 75%   | 0.77   | 0.80                |          |
|  | 100%  | 0.82   | 0.86                |          |
| Bearing type   | : <u>Drive end</u> 6209 ZZ <u>Non drive end</u> 6206 ZZ | Foundation loads   |                     |          |
| Sealing  | : Without Without<br>Bearing Seal Bearing Seal          | Max. traction  | : 317 lb            |          |
|  |   | Max. compression   | : 444 lb            |          |
| Lubrication interval   | : - -   |  |                     |          |
| Lubricant amount   | : - -   |  |                     |          |
| Lubricant type   | : Mobil Polyrex EM                                      |  |                     |          |
| Notes<br>USABLE @208V 20.5A SF 1.00 SFA 20.5A  |   |  |                     |          |
| This revision replaces and cancel the previous one, which must be eliminated.<br>(1) Looking the motor from the shaft end.<br>(2) Measured at 1m and with tolerance of +3dB(A).<br>(3) Approximate weight subject to changes after manufacturing process.<br>(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. |                     |          |
| Rev.   | Changes Summary   | Performed  | Checked             | Date     |
| Performed by   |   |  |                     |          |
| Checked by   |   |  | Page                | Revision |
| Date   | 13/04/2022  |  | 1 / 16              |          |

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



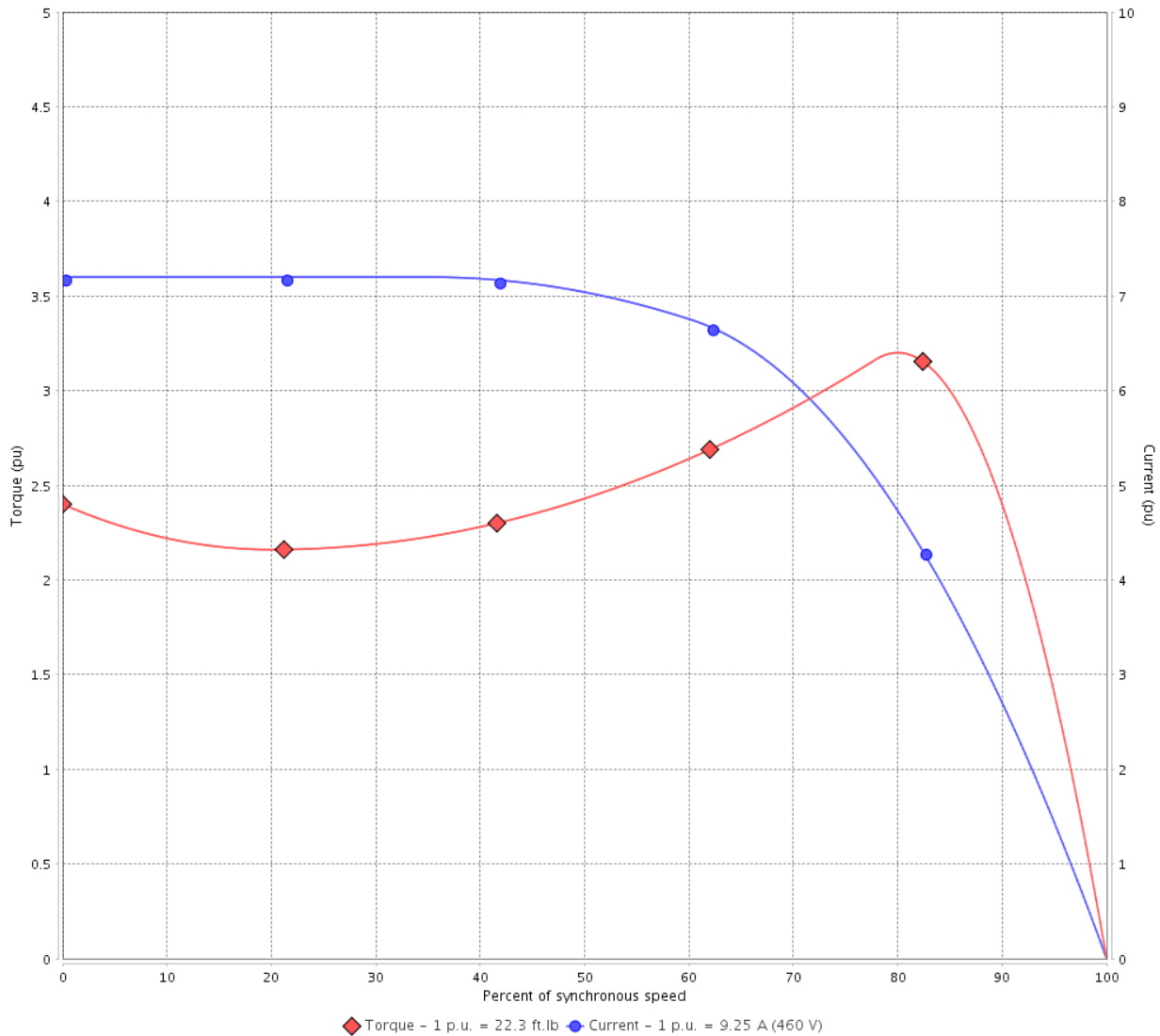
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

|                     |               |                       |                 |
|---------------------|---------------|-----------------------|-----------------|
| Rated current       | : 18.5/9.25 A | Moment of inertia (J) | : 1.03 sq.ft.lb |
| LRC                 | : 7.2         | Duty cycle            | : Cont.(S1)     |
| Rated torque        | : 22.3 ft.lb  | Insulation class      | : F             |
| Locked rotor torque | : 240 %       | Service factor        | : 1.15          |
| Breakdown torque    | : 320 %       | Temperature rise      | : 80 K          |
| Rated speed         | : 1770 rpm    | Design                | : B             |

Locked rotor time : 23s (cold) 13s (hot)

| Rev.         | Changes Summary | Performed | Checked        | Date     |
|--------------|-----------------|-----------|----------------|----------|
|              |                 |           |                |          |
| Performed by |                 |           | Page<br>2 / 16 | Revision |
| Checked by   |                 |           |                |          |
| Date         | 13/04/2022      |           |                |          |

# TORQUE AND CURRENT VS SPEED CURVE



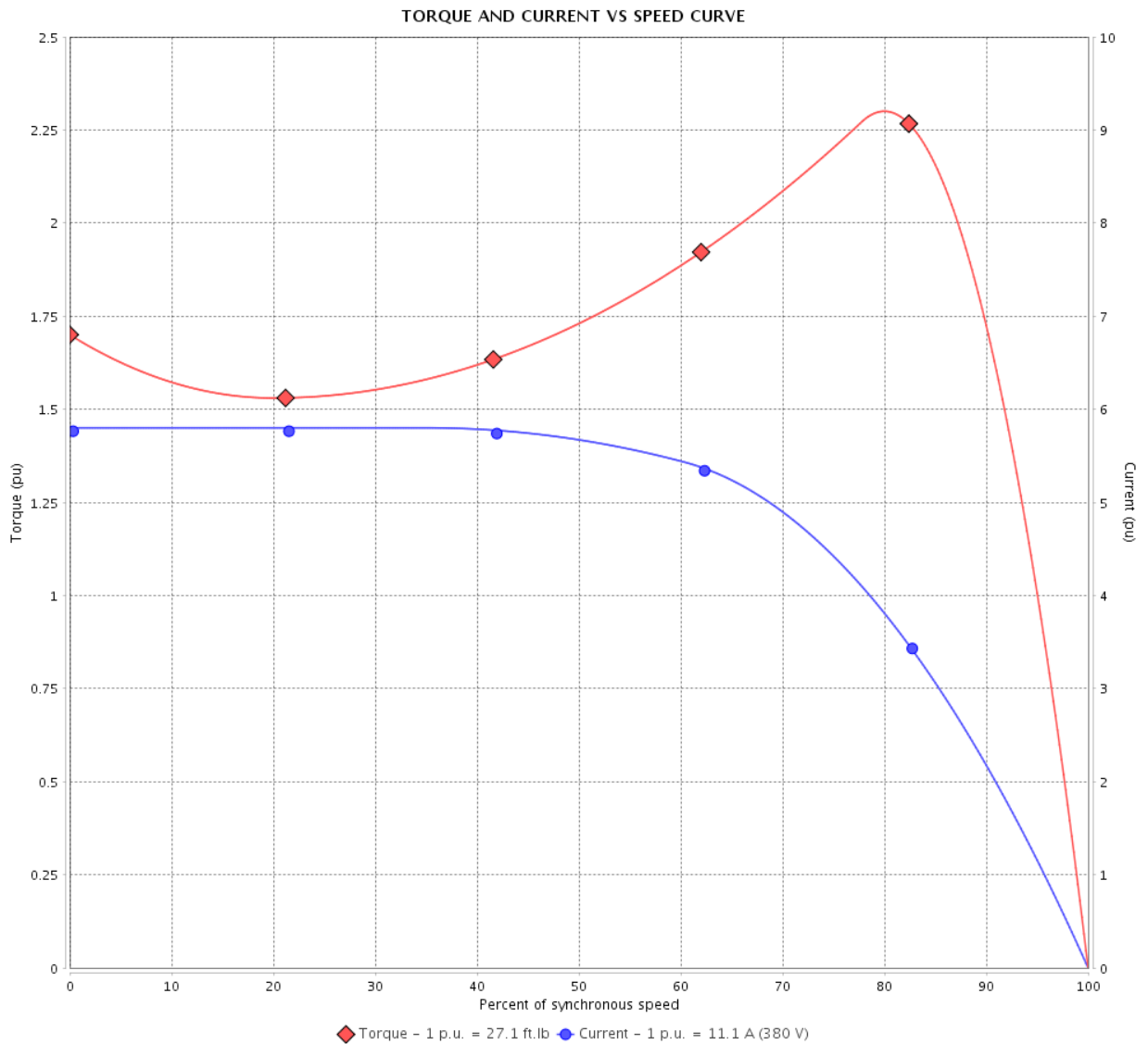
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S



Performance : 190/380 V 50 Hz 4P

Rated current : 22.2/11.1 A  
 LRC : 5.8  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 229 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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

| Rev.         | Changes Summary | Performed | Checked        | Date     |
|--------------|-----------------|-----------|----------------|----------|
|              |                 |           |                |          |
| Performed by |                 |           | Page<br>3 / 16 | Revision |
| Checked by   |                 |           |                |          |
| Date         | 13/04/2022      |           |                |          |

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



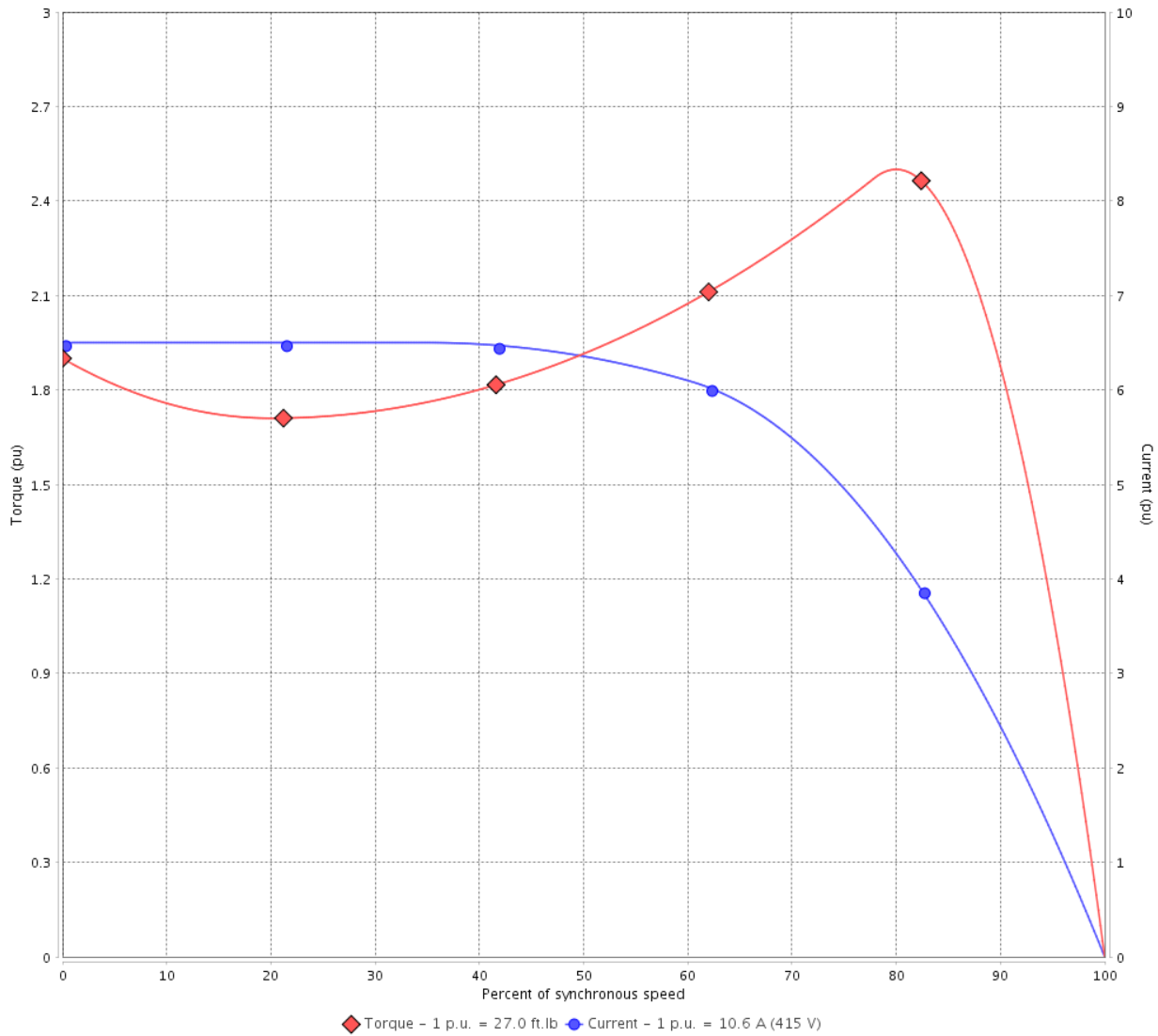
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

|                     |               |                       |                 |
|---------------------|---------------|-----------------------|-----------------|
| Rated current       | : 20.0/10.6 A | Moment of inertia (J) | : 1.03 sq.ft.lb |
| LRC                 | : 6.5         | Duty cycle            | : Cont.(S1)     |
| Rated torque        | : 27.0 ft.lb  | Insulation class      | : F             |
| Locked rotor torque | : 190 %       | Service factor        | : 1.15          |
| Breakdown torque    | : 250 %       | Temperature rise      | : 80 K          |
| Rated speed         | : 1460 rpm    | Design                | : B             |

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

| Rev.         | Changes Summary | Performed | Checked        | Date     |
|--------------|-----------------|-----------|----------------|----------|
|              |                 |           |                |          |
| Performed by |                 |           | Page<br>4 / 16 | Revision |
| Checked by   |                 |           |                |          |
| Date         | 13/04/2022      |           |                |          |

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

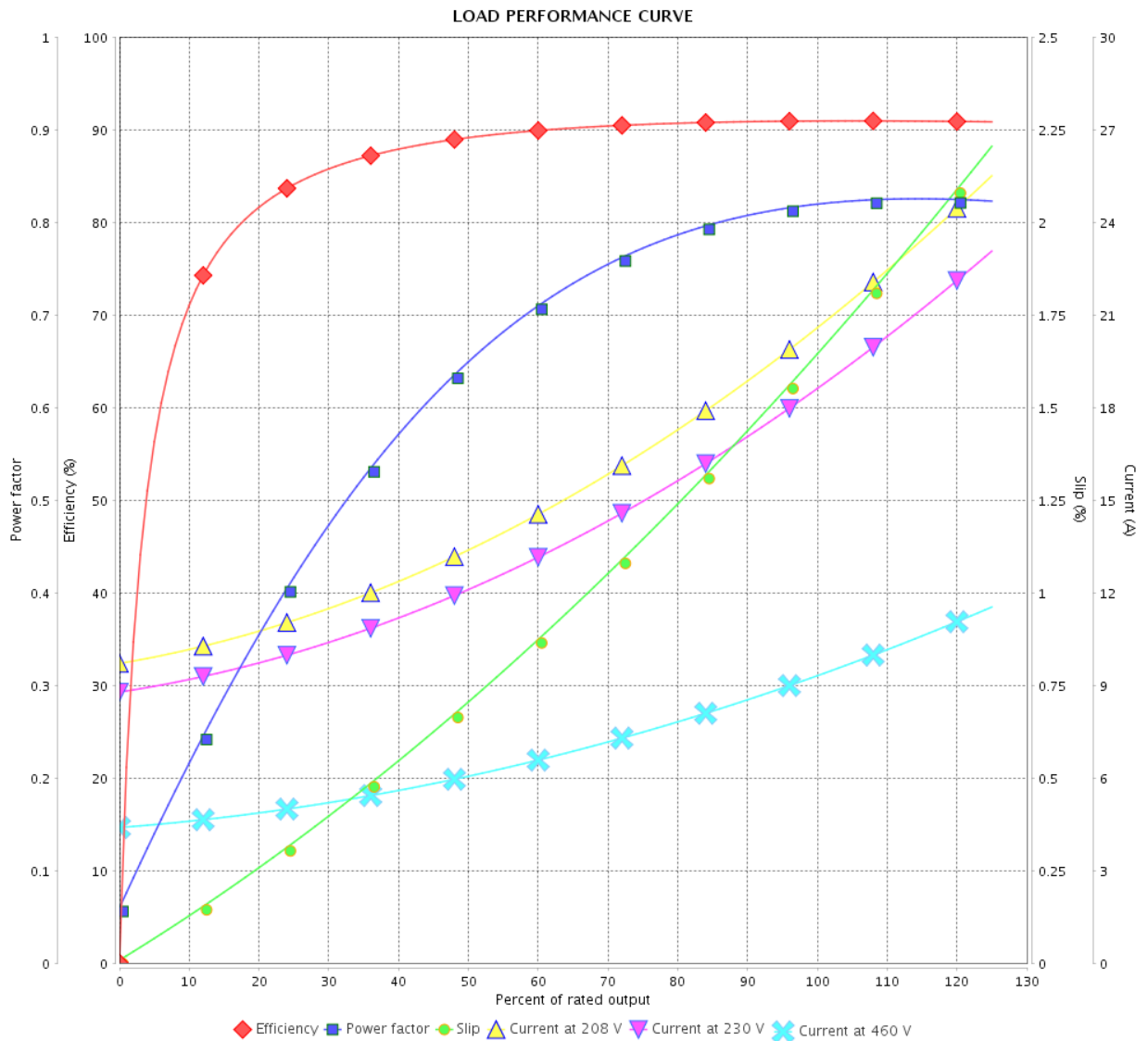


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S



Performance : 230/460 V 60 Hz 4P

Rated current : 18.5/9.25 A  
 LRC : 7.2  
 Rated torque : 22.3 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 320 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

| Rev.         | Changes Summary | Performed  | Checked | Date     |
|--------------|-----------------|------------|---------|----------|
|              |                 |            |         |          |
| Performed by |                 | Page       |         | Revision |
| Checked by   |                 | 5 / 16     |         |          |
| Date         |                 | 13/04/2022 |         |          |

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



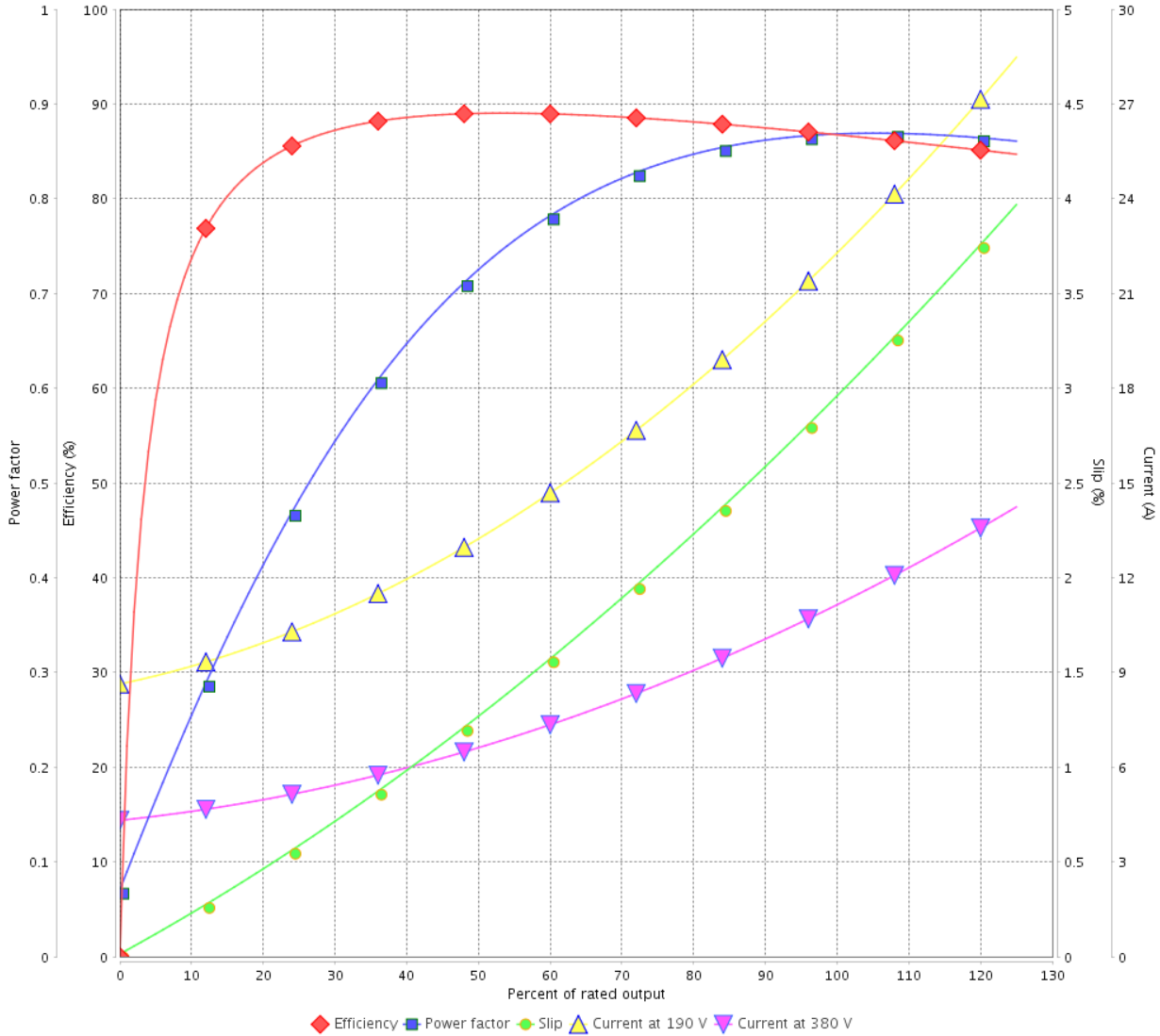
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676980

Catalog # : 007180T3E213JM-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 4P

Rated current : 22.2/11.1 A  
 LRC : 5.8  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 229 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           | Page    | Revision |
| Checked by   |                 |           | 6 / 16  |          |
| Date         | 13/04/2022      |           |         |          |

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

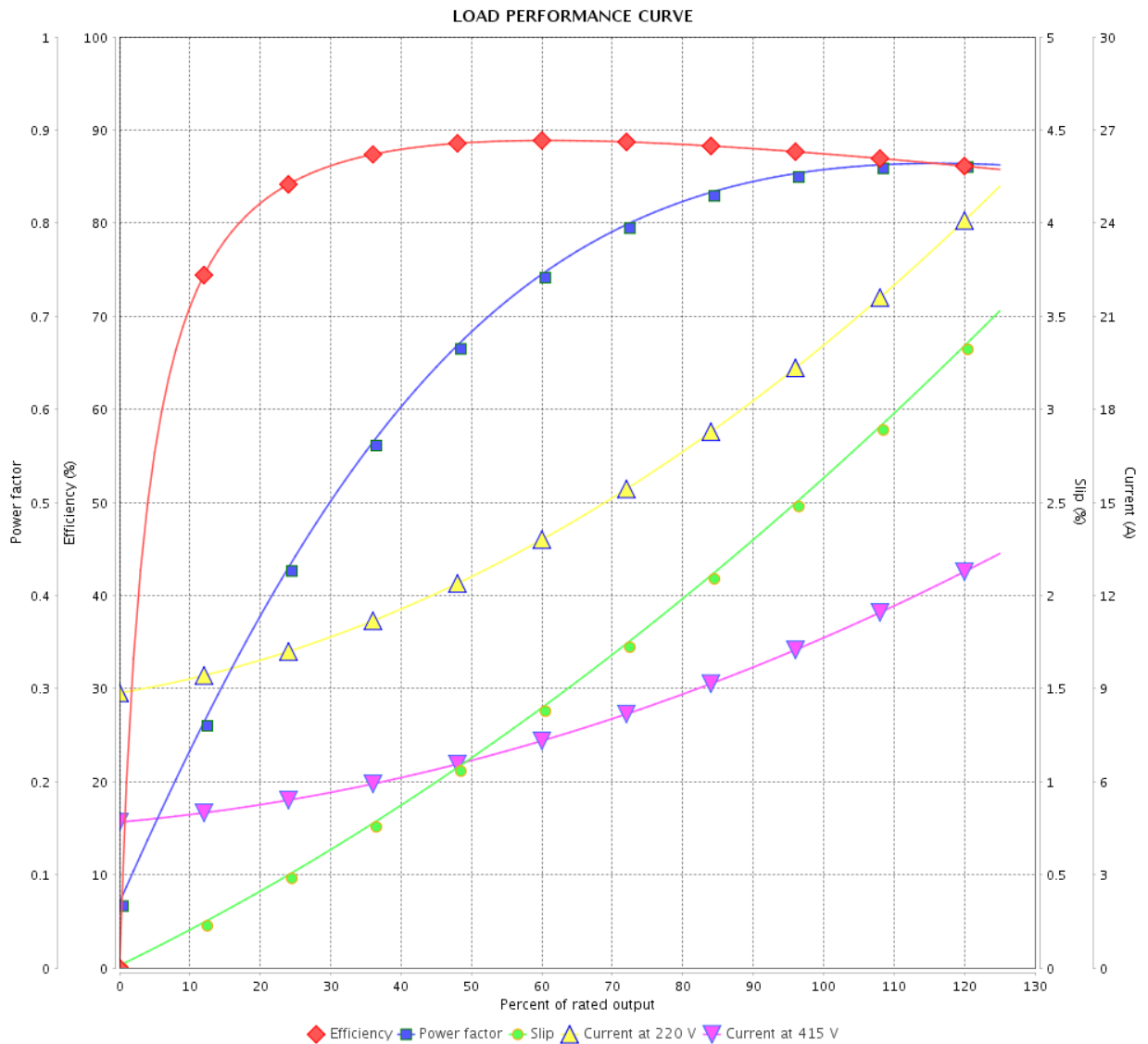


Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S



Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A  
LRC : 6.5  
Rated torque : 27.0 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 250 %  
Rated speed : 1460 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           | Page    | Revision |
| Checked by   |                 |           |         |          |
| Date         |                 |           |         |          |

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S

Performance : 230/460 V 60 Hz 4P

Rated current : 18.5/9.25 A  
LRC : 7.2  
Rated torque : 22.3 ft.lb  
Locked rotor torque : 240 %  
Breakdown torque : 320 %  
Rated speed : 1770 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           |         |          |
| Checked by   |                 |           | Page    | Revision |
| Date         | 13/04/2022      |           | 8 / 16  |          |

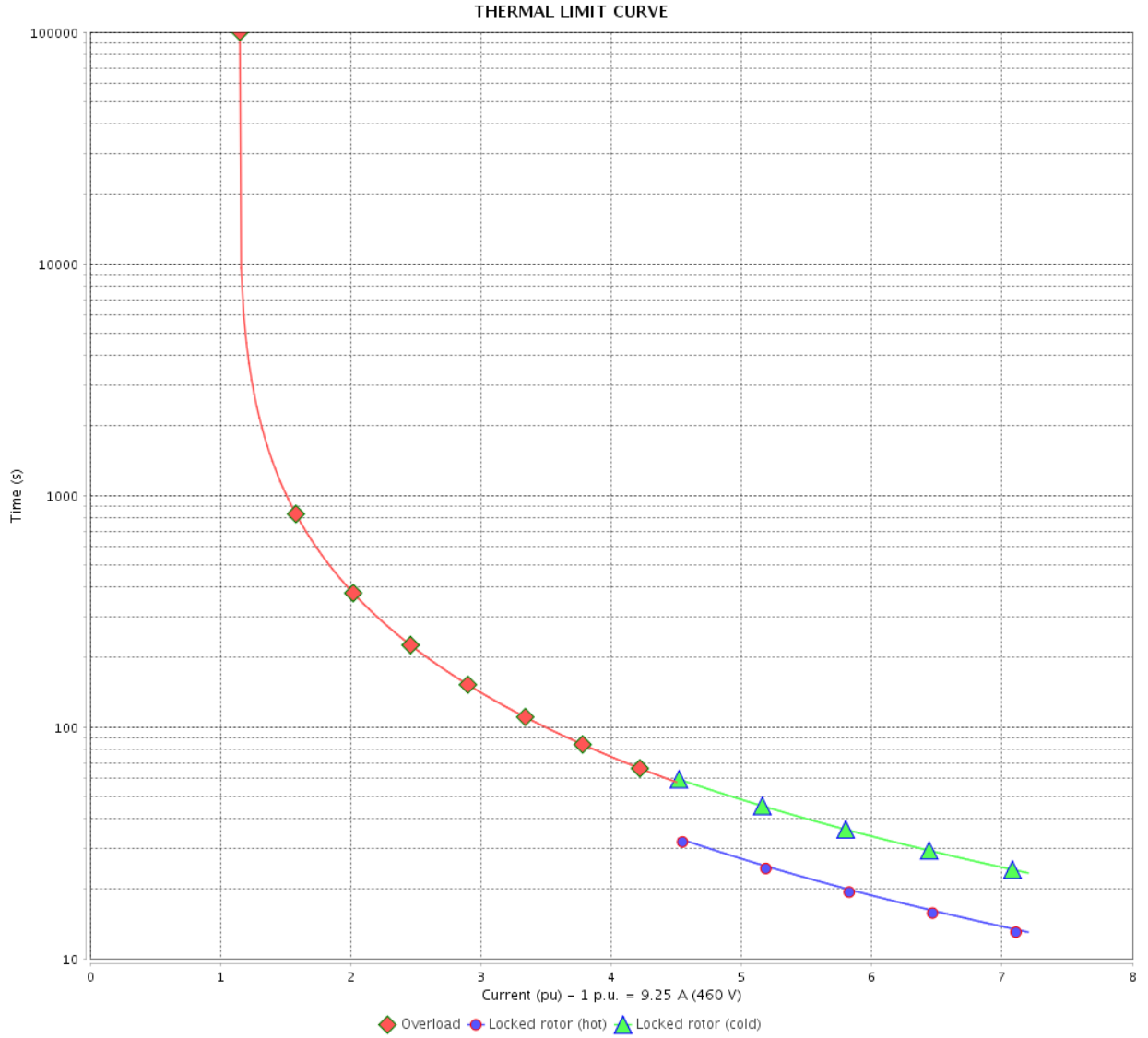


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



| Rev.         | Changes Summary | Performed  | Checked | Date     |
|--------------|-----------------|------------|---------|----------|
|              |                 |            |         |          |
| Performed by |                 | Page       |         | Revision |
| Checked by   |                 | 9 / 16     |         |          |
| Date         |                 | 13/04/2022 |         |          |

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S

Performance : 190/380 V 50 Hz 4P

Rated current : 22.2/11.1 A  
LRC : 5.8  
Rated torque : 27.1 ft.lb  
Locked rotor torque : 170 %  
Breakdown torque : 229 %  
Rated speed : 1455 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

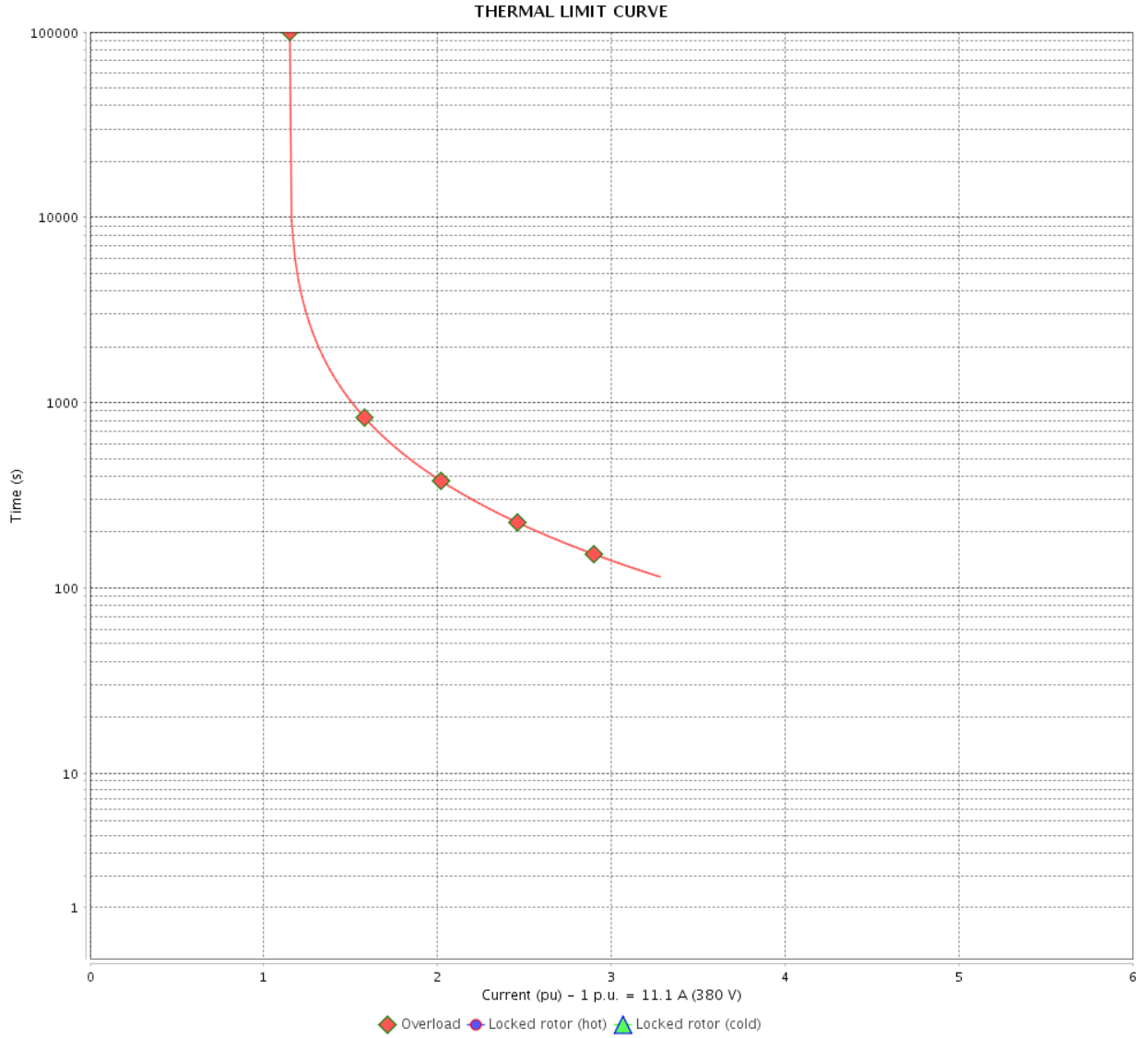
| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           |         |          |
| Checked by   |                 |           | Page    | Revision |
| Date         | 13/04/2022      |           | 10 / 16 |          |

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



| Rev.         | Changes Summary | Performed  | Checked | Date     |
|--------------|-----------------|------------|---------|----------|
|              |                 |            |         |          |
| Performed by |                 | Page       |         | Revision |
| Checked by   |                 | 11 / 16    |         |          |
| Date         |                 | 13/04/2022 |         |          |

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S

Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A  
LRC : 6.5  
Rated torque : 27.0 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 250 %  
Rated speed : 1460 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

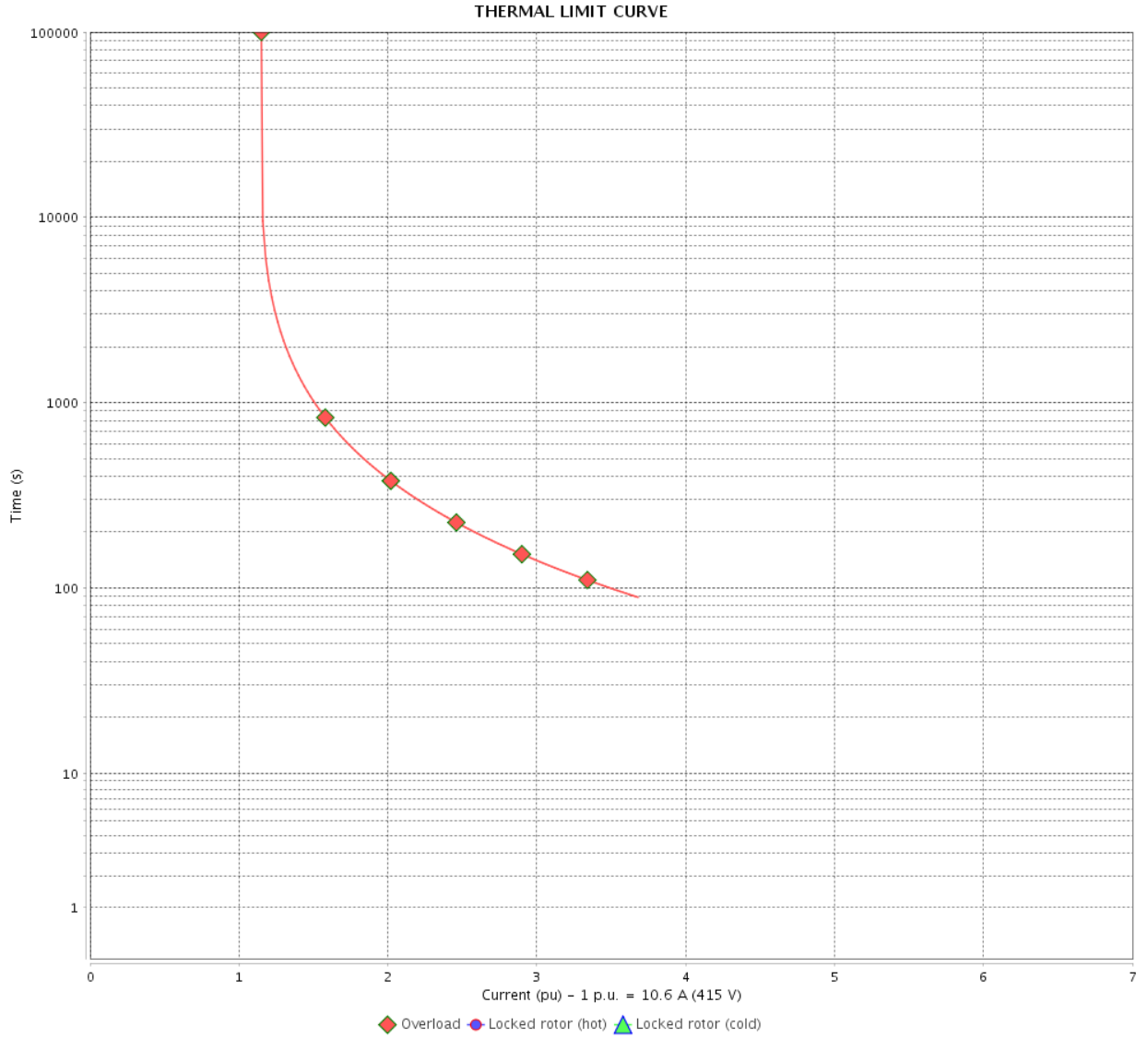
| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           |         |          |
| Checked by   |                 |           | Page    | Revision |
| Date         | 13/04/2022      |           | 12 / 16 |          |

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



| Rev.         | Changes Summary | Performed  | Checked | Date     |
|--------------|-----------------|------------|---------|----------|
|              |                 |            |         |          |
| Performed by |                 | Page       |         | Revision |
| Checked by   |                 | 13 / 16    |         |          |
| Date         |                 | 13/04/2022 |         |          |

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



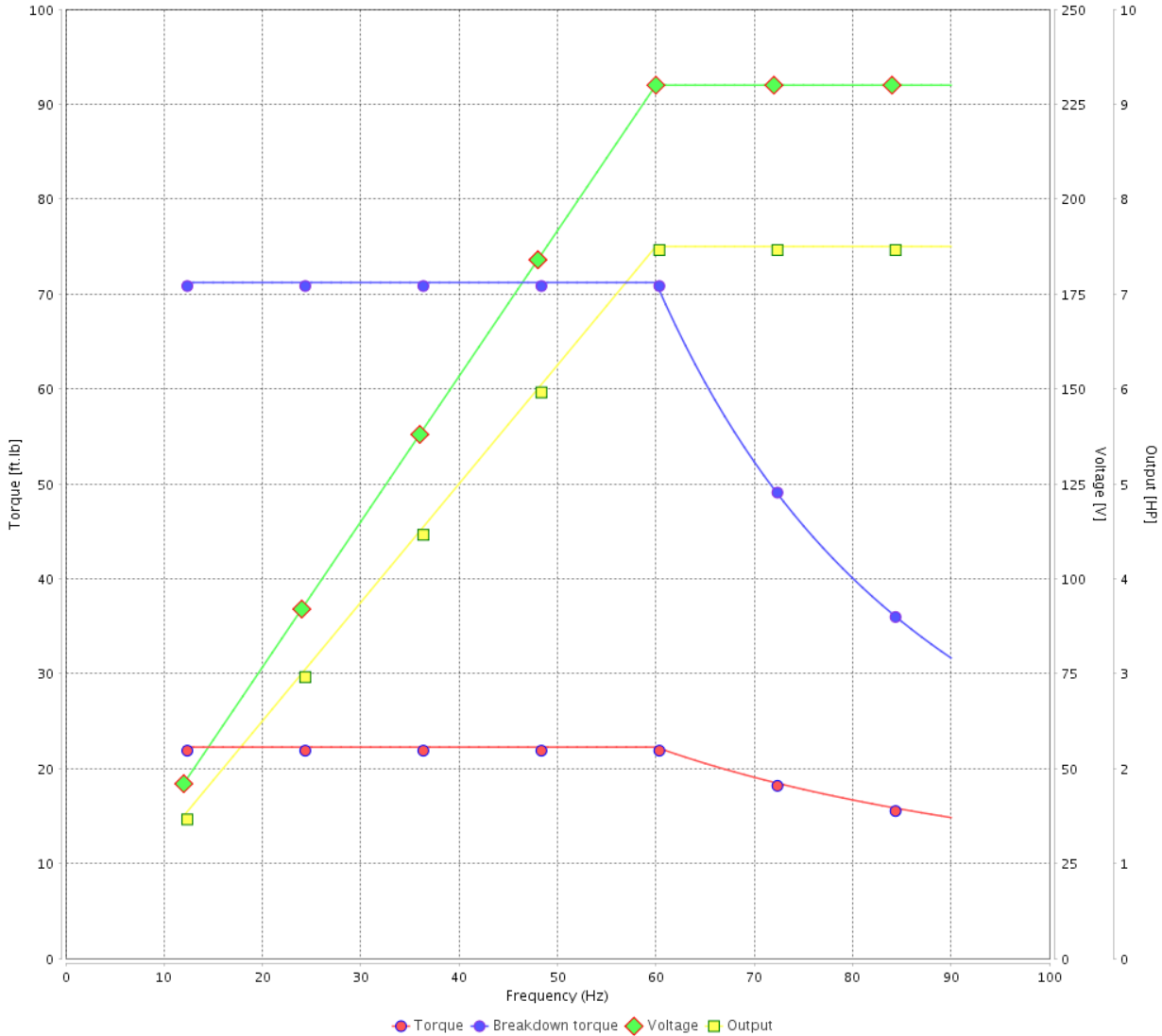
Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 18.5/9.25 A  
 LRC : 7.2  
 Rated torque : 22.3 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 320 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

| Rev.         | Changes Summary | Performed | Checked         | Date     |
|--------------|-----------------|-----------|-----------------|----------|
|              |                 |           |                 |          |
| Performed by |                 |           | Page<br>14 / 16 | Revision |
| Checked by   |                 |           |                 |          |
| Date         | 13/04/2022      |           |                 |          |

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

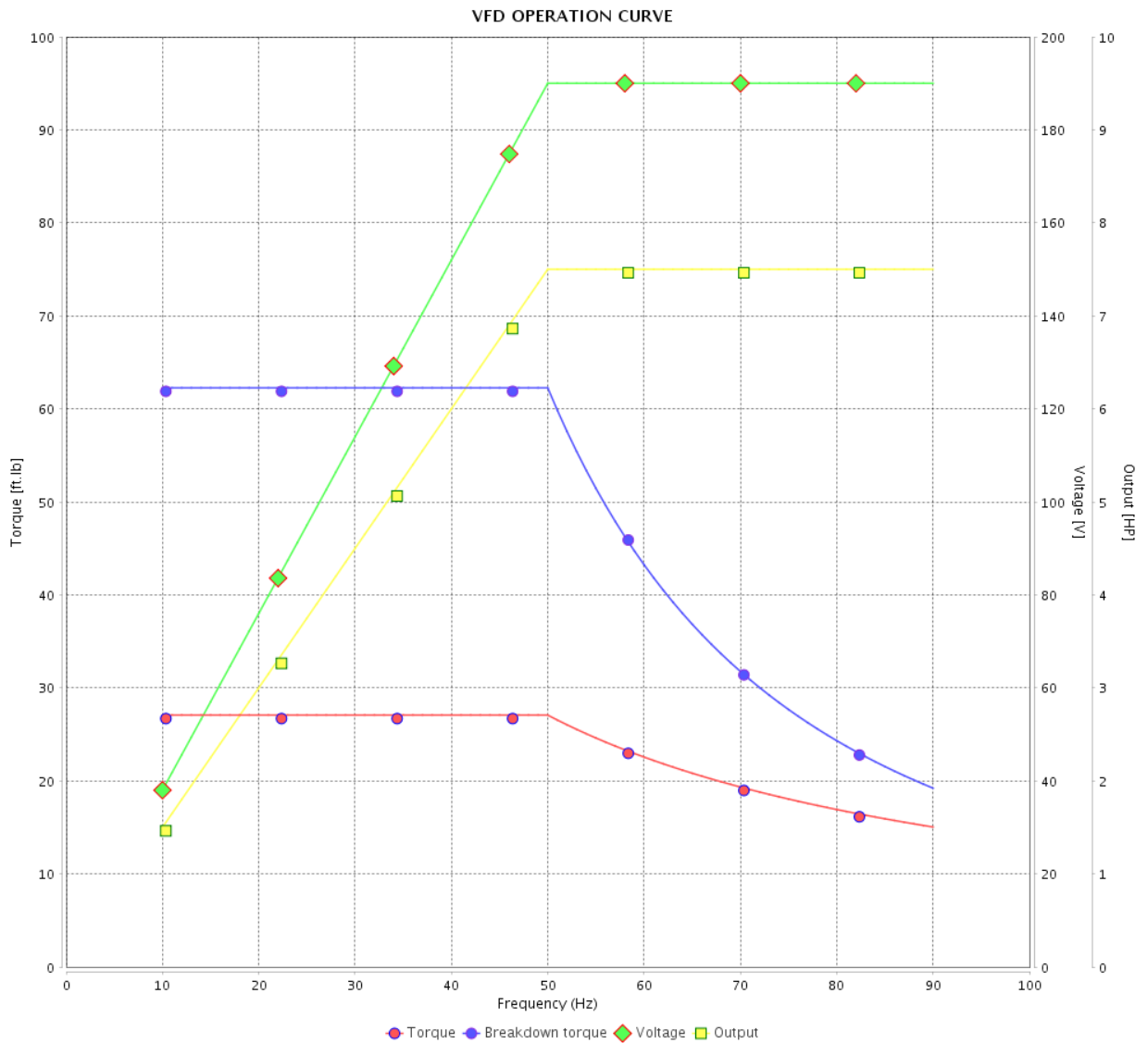


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S



Performance : 190/380 V 50 Hz 4P

Rated current : 22.2/11.1 A  
 LRC : 5.8  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 229 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

| Rev.         | Changes Summary | Performed  | Checked | Date     |
|--------------|-----------------|------------|---------|----------|
|              |                 |            |         |          |
| Performed by |                 | Page       |         | Revision |
| Checked by   |                 | 15 / 16    |         |          |
| Date         |                 | 13/04/2022 |         |          |

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



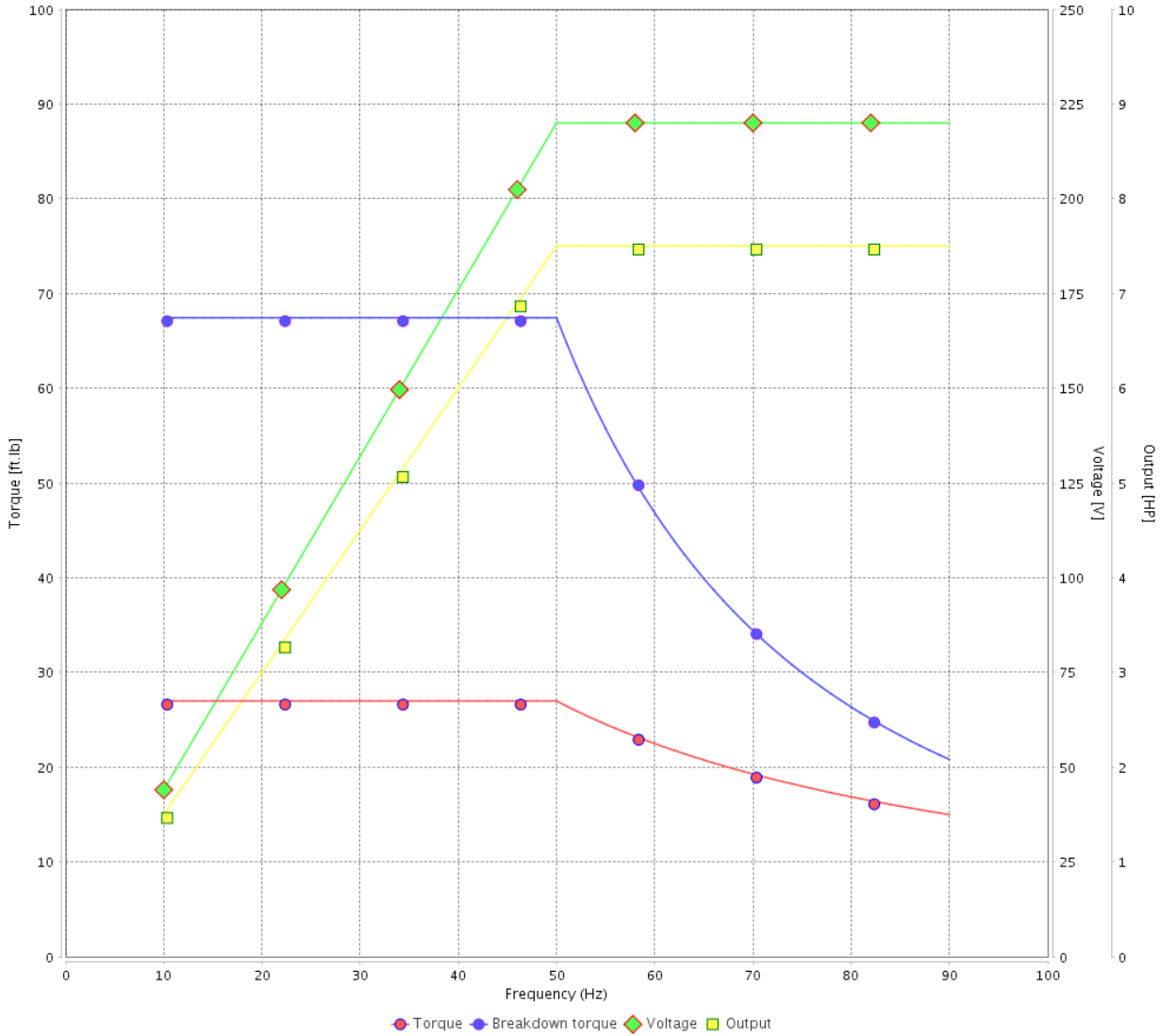
Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12676980

Catalog # : 00718OT3E213JM-S

VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A  
 LRC : 6.5  
 Rated torque : 27.0 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 250 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.03 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

| Rev.         | Changes Summary | Performed | Checked         | Date     |
|--------------|-----------------|-----------|-----------------|----------|
|              |                 |           |                 |          |
| Performed by |                 |           | Page<br>16 / 16 | Revision |
| Checked by   |                 |           |                 |          |
| Date         | 13/04/2022      |           |                 |          |



1 2 3 4 5 6

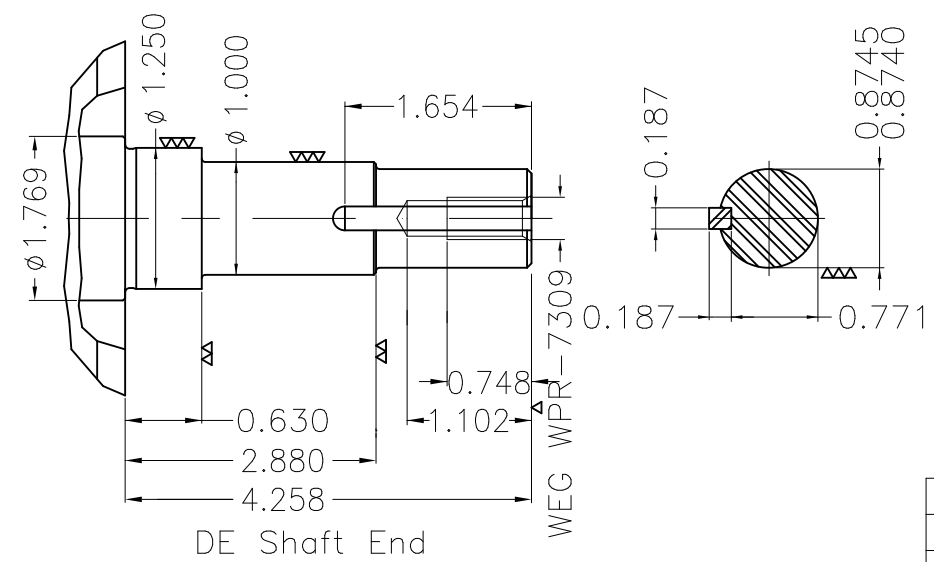
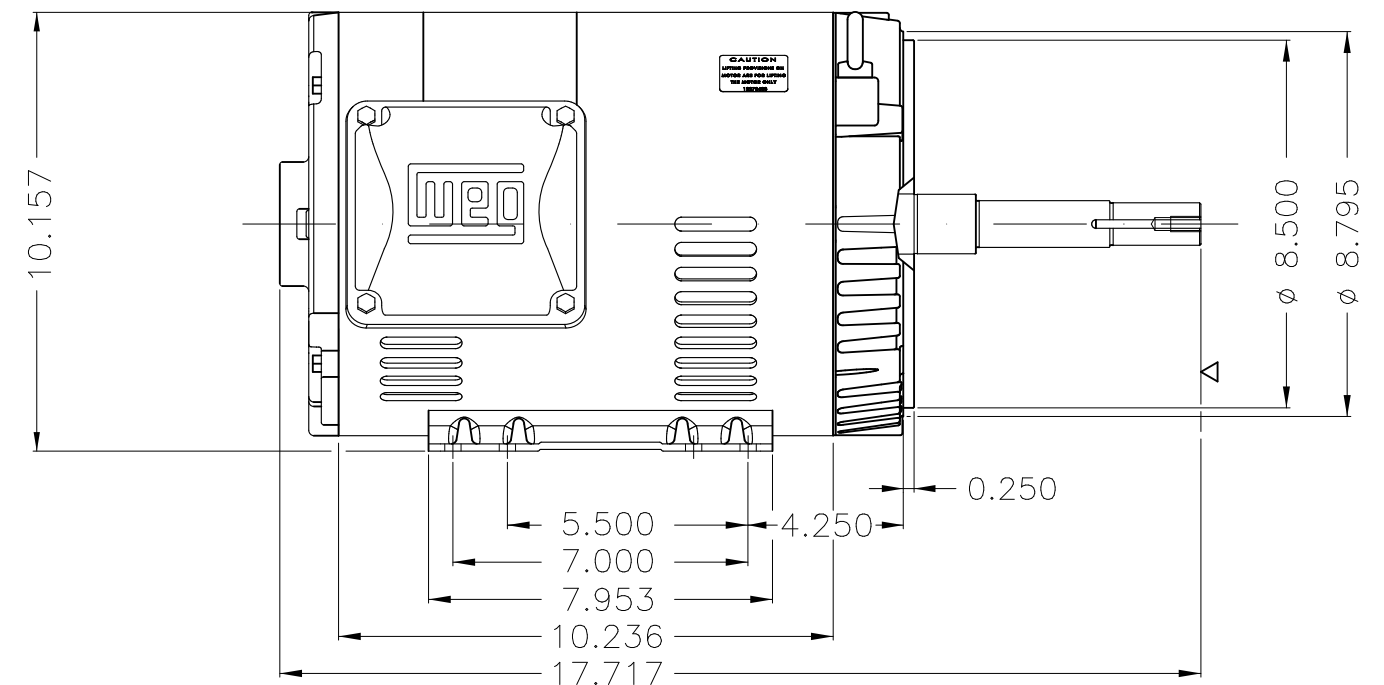
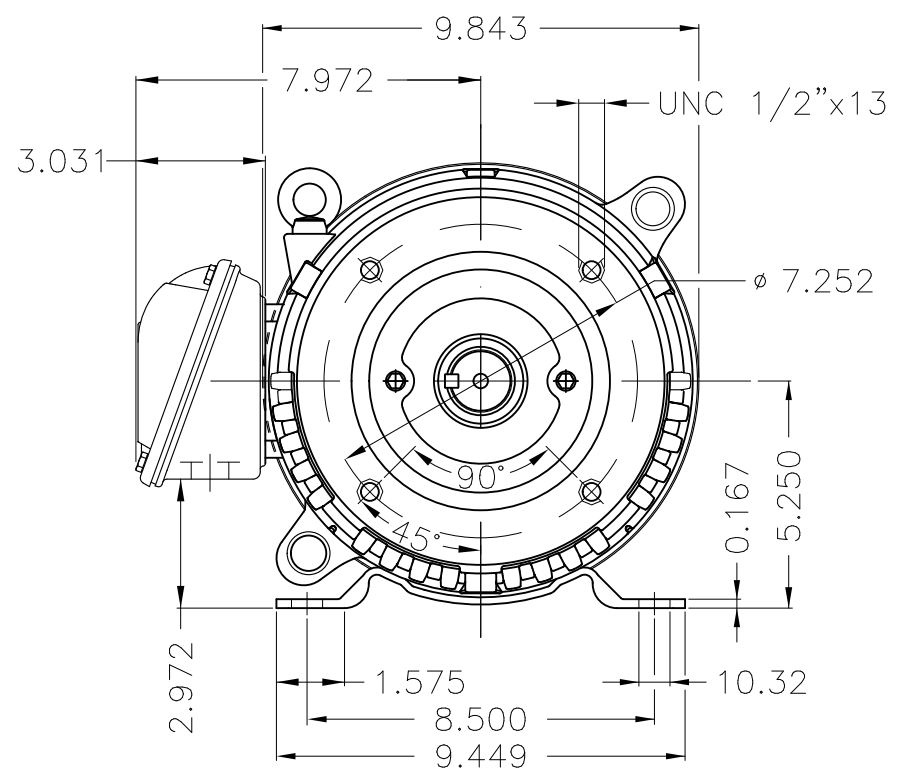
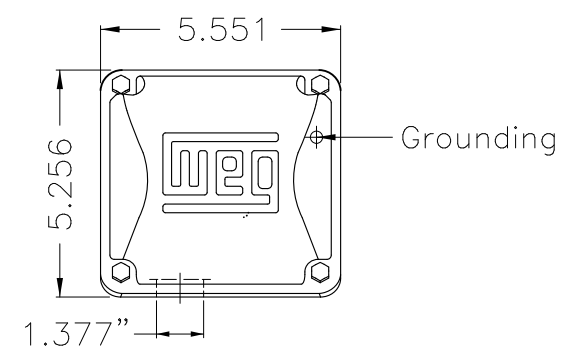
A

B

C

D

E

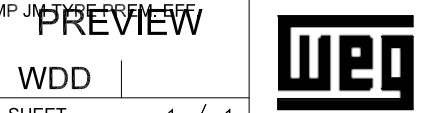


EUNC 3/8" - 16 WEG WPR-7309

|                               |          |   |                |                     |          |         |          |      |     |
|-------------------------------|----------|---|----------------|---------------------|----------|---------|----------|------|-----|
| Color Munsell N 1 matte black |          |   |                |                     |          |         |          |      |     |
| Painting plan 207N            |          |   |                |                     |          |         |          |      |     |
| Mounting F-1/B34R(D)          |          |   |                |                     |          |         |          |      |     |
|                               |          |   |                |                     |          |         |          |      |     |
|                               |          |   |                |                     |          |         |          |      |     |
| ECM                           | LOC      | SUMMARY OF MODIFICATIONS  |                |                     | EXECUTED | CHECKED | RELEASED | DATE | VER |
| EXECUTED                      | PIRBUSER | THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 107 |                |                     |          |         |          |      |     |
| CHECKED                       |          | FRAME 213/5JM IP21 ODP  |                |                     |          |         |          |      |     |
| RELEASED                      |          |   |                |                     |          |         |          |      |     |
| REL DT.                       |          | WMO   | Jaragua do Sul | Product Engineering |          |         |          |      |     |

7.5 HP 04 Poles 60 Hz

REL DT. WMO Jaragua do Sul Product Engineering SHEET 1 / 1



Dimensions in inches XME A3

**NEMA**  
**Premium**

3PT9



Energy Verified

MADE IN MEXICO

**MAT: 12676980 CC029A****W01.T00IC0X0N****MODEL 007180T3E213JM-S****05APR2022 S/N:**

|                            |               |                                |
|----------------------------|---------------|--------------------------------|
| <b>PH 3</b>                | <b>Hz 60</b>  | <b>HP 7.5</b>                  |
| <b>FR 213/5JM</b>          |               | <b>KW 5.5</b>                  |
| <b>DUTY CONT.</b>          |               | <b>V 230/460</b>               |
| <b>ALT 1000 m.a.s.l.</b>   |               | <b>A 18.5/9.25</b>             |
| <b>INS CL F AT 80K</b>     |               | <b>SFA 21.3/10.6</b>           |
| <b>AMB 40°C</b>            | <b>DES B</b>  | <b>SF 1.15</b>                 |
| <b>ENCL ODP</b>            | <b>CODE H</b> | <b>PF 0.82</b>                 |
| <b>USABLE @ 208V 20.5A</b> |               | <b>RPM 1770</b>                |
| <b>SF1.00</b>              |               | <b>NEMA<br/>NOM. EFF 91.0%</b> |

|   |
|---|
| <b>ALTERNATE RATING: 7.5HP 50Hz 190-220/380-415V SF1.15</b>     |
| <b>22.2-19.6/11.1-10.4A 1455RPM EFF 86.7% (IE1) IEC 60034-1</b> |

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

|                   |                    |                         |
|-------------------|--------------------|-------------------------|
| <b>DE 6209-ZZ</b> | <b>ODE 6206-ZZ</b> | <b>MOBIL POLYREX EM</b> |
|-------------------|--------------------|-------------------------|



T1-BLU T2-WHT  
T3-ORG T4-YEL  
T5-BLK T6-GRY  
T7-PNK T8-RED  
T9-BRK RED

**INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION**

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

**AVERTISSEMENT:** Le moteur doit être mis à la terre

conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

