

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

|   |  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
|---|--|----------------------|------------------|----------------------|----------------|---------|---------|-----------|--------|--------|------------------------|---|---|--------------------|---|---|------------------|------------------|--|
| Customer :  |  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Product line  | : NEMA Premium Efficiency Three-Phase  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Product code :  | 11570361   |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Catalog # :   | 00518ET3H184JM-W22   |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Frame : 182/4JM<br>Output : 5 HP (3.7 kW)<br>Poles : 4<br>Frequency : 60 Hz<br>Rated voltage : 575 V<br>Rated current : 5.16 A<br>L. R. Amperes : 38.7 A<br>LRC : 7.5x(Code J)<br>No load current : 2.56 A<br>Rated speed : 1755 rpm<br>Slip : 2.50 %<br>Rated torque : 15.0 ft.lb<br>Locked rotor torque : 229 %<br>Breakdown torque : 320 %<br>Insulation class : F<br>Service factor : 1.25<br>Moment of inertia (J) : 0.4003 sq.ft.lb<br>Design : B | Locked rotor time : 27s (cold) 15s (hot)<br>Temperature rise : 80 K<br>Duty cycle : Cont.(S1)<br>Ambient temperature : -20°C to +40°C<br>Altitude : 1000 m.a.s.l.<br>Protection degree : IP55<br>Cooling method : IC411 - TEFC<br>Mounting : F-1<br>Rotation <sup>1</sup> : Both (CW and CCW)<br>Noise level <sup>2</sup> : 56.0 dB(A)<br>Starting method : Direct On Line<br>Approx. weight <sup>3</sup> : 102 lb   |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Output  | 25%    50%    75%    100%  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Efficiency (%)  | 88.2    88.5    89.5    89.5   |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Power Factor  | 0.37    0.62    0.74    0.80   |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Foundation loads  |  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Max. traction : 255 lb  |  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Max. compression : 357 lb   |  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
|   | <table border="0" style="width:100%;"> <tr> <td style="width: 50%;"></td> <td style="text-align: center;"><u>Drive end</u></td> <td style="text-align: center;"><u>Non drive end</u></td> </tr> <tr> <td>Bearing type :</td> <td style="text-align: center;">6307 ZZ</td> <td style="text-align: center;">6206 ZZ</td> </tr> <tr> <td>Sealing :</td> <td style="text-align: center;">V'Ring</td> <td style="text-align: center;">V'Ring</td> </tr> <tr> <td>Lubrication interval :</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Lubricant amount :</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Lubricant type :</td> <td colspan="2" style="text-align: center;">Mobil Polyrex EM</td> </tr> </table> |                      | <u>Drive end</u> | <u>Non drive end</u> | Bearing type : | 6307 ZZ | 6206 ZZ | Sealing : | V'Ring | V'Ring | Lubrication interval : | - | - | Lubricant amount : | - | - | Lubricant type : | Mobil Polyrex EM |  |
|   | <u>Drive end</u>   | <u>Non drive end</u> |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Bearing type :  | 6307 ZZ  | 6206 ZZ              |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Sealing :   | V'Ring   | V'Ring               |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Lubrication interval :  | -  | -                    |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Lubricant amount :  | -  | -                    |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Lubricant type :  | Mobil Polyrex EM   |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| Notes   |  |                      |                  |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |
| 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  | 01/07/2022   |                      | 1 / 6            |                      |                |         |         |           |        |        |                        |   |   |                    |   |   |                  |                  |  |

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



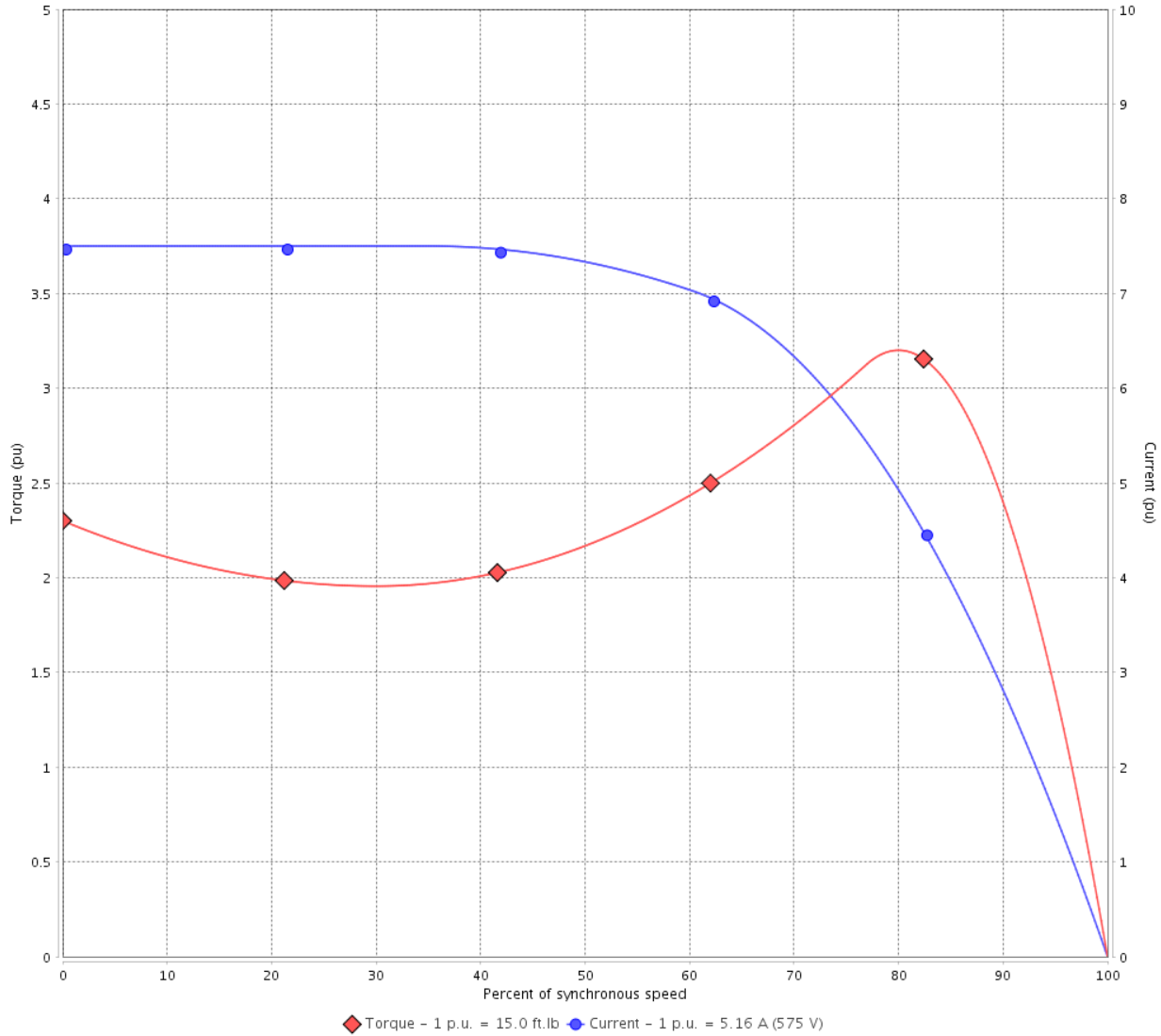
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11570361

Catalog # : 00518ET3H184JM-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 4P

|                     |              |                       |                   |
|---------------------|--------------|-----------------------|-------------------|
| Rated current       | : 5.16 A     | Moment of inertia (J) | : 0.4003 sq.ft.lb |
| LRC                 | : 7.5        | Duty cycle            | : Cont.(S1)       |
| Rated torque        | : 15.0 ft.lb | Insulation class      | : F               |
| Locked rotor torque | : 229 %      | Service factor        | : 1.25            |
| Breakdown torque    | : 320 %      | Temperature rise      | : 80 K            |
| Rated speed         | : 1755 rpm   | Design                | : B               |

Locked rotor time : 27s (cold) 15s (hot)

| Rev.         | Changes Summary | Performed | Checked       | Date     |
|--------------|-----------------|-----------|---------------|----------|
|              |                 |           |               |          |
| Performed by |                 |           | Page<br>2 / 6 | Revision |
| Checked by   |                 |           |               |          |
| Date         | 01/07/2022      |           |               |          |

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

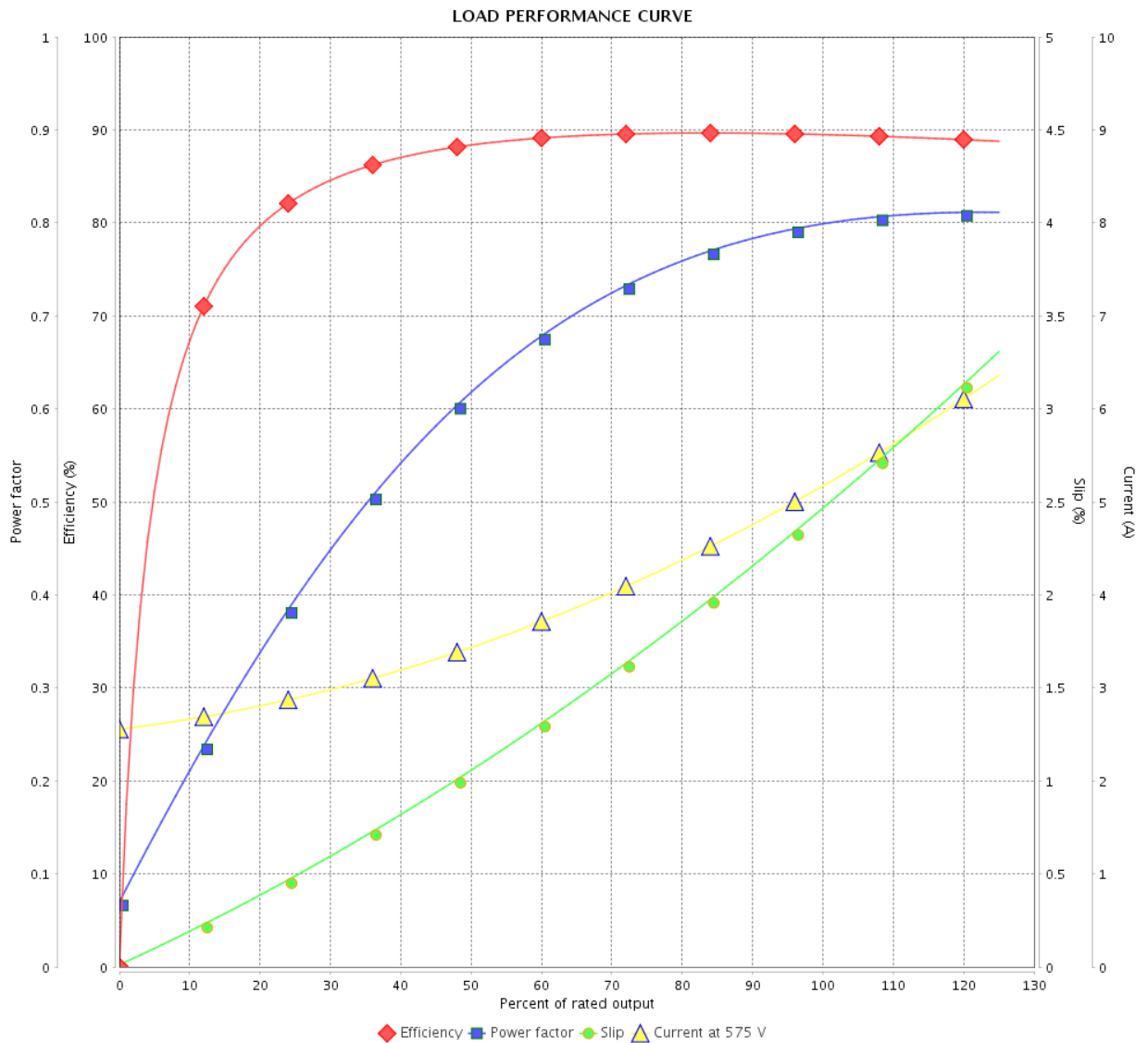


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11570361

Catalog # : 00518ET3H184JM-W22



Performance : 575 V 60 Hz 4P

Rated current : 5.16 A  
 LRC : 7.5  
 Rated torque : 15.0 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 320 %  
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.4003 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
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| Performed by |                 |           | Page    | Revision |
| Checked by   |                 |           | 3 / 6   |          |
| Date         | 01/07/2022      |           |         |          |

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 11570361  
Catalog # : 00518ET3H184JM-W22

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| Rated speed         | : 1755 rpm   | Design                | : B               |

Heating constant

Cooling constant

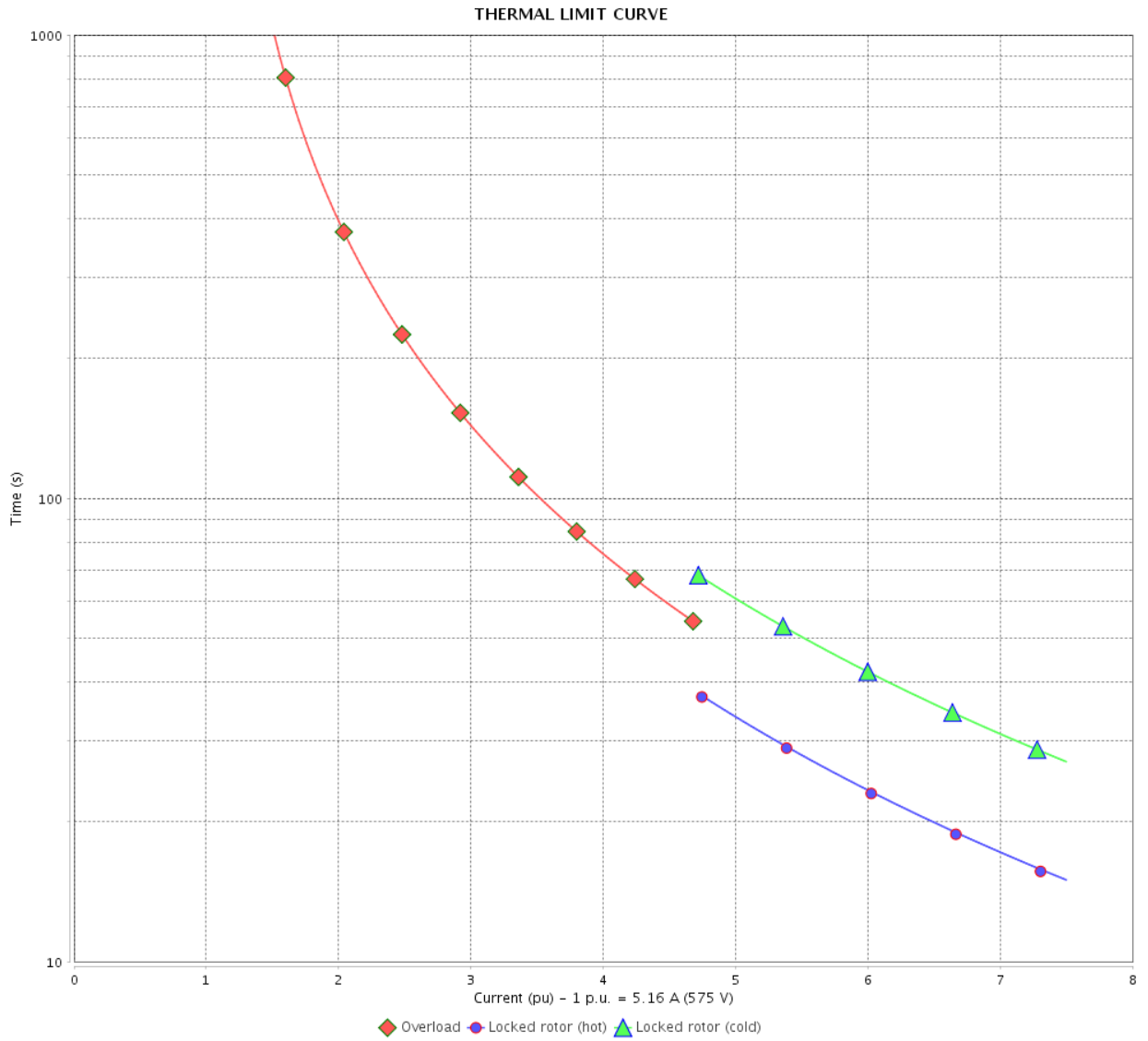
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| Checked by   |                 |           | Page    | Revision |
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



| Rev.         | Changes Summary | Performed     | Checked | Date     |
|--------------|-----------------|---------------|---------|----------|
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| Performed by |                 | Page<br>5 / 6 |         | Revision |
| Checked by   |                 |               |         |          |
| Date         |                 |               |         |          |

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

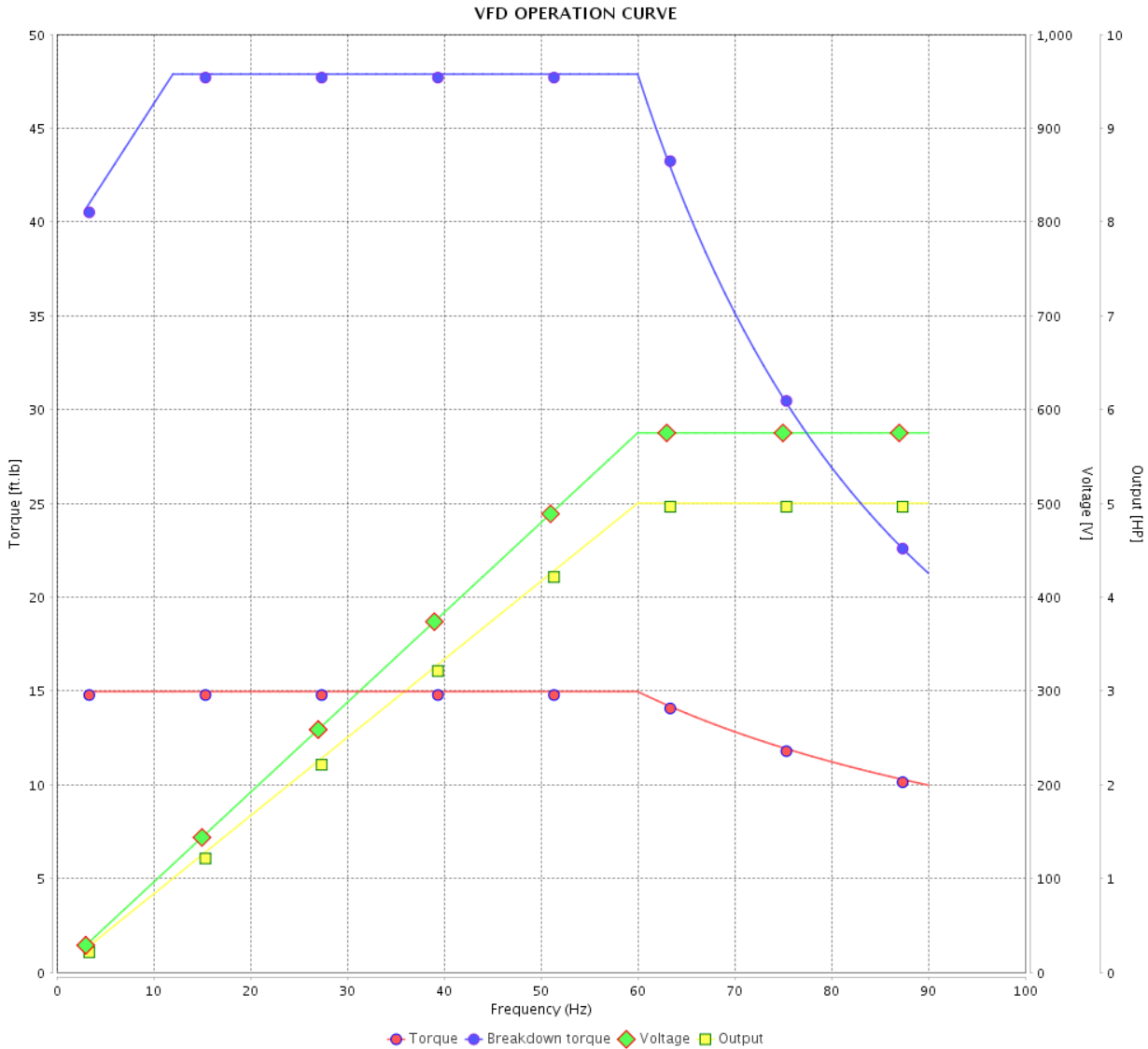


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11570361

Catalog # : 00518ET3H184JM-W22



Performance : 575 V 60 Hz 4P

Rated current : 5.16 A  
 LRC : 7.5  
 Rated torque : 15.0 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 320 %  
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.4003 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

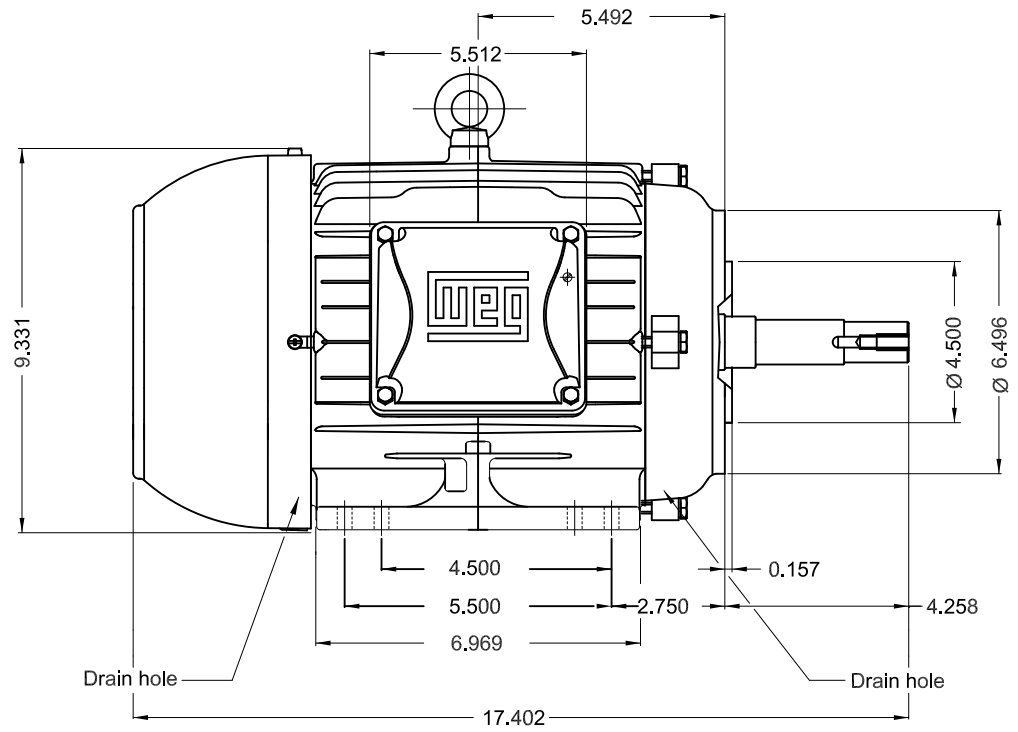
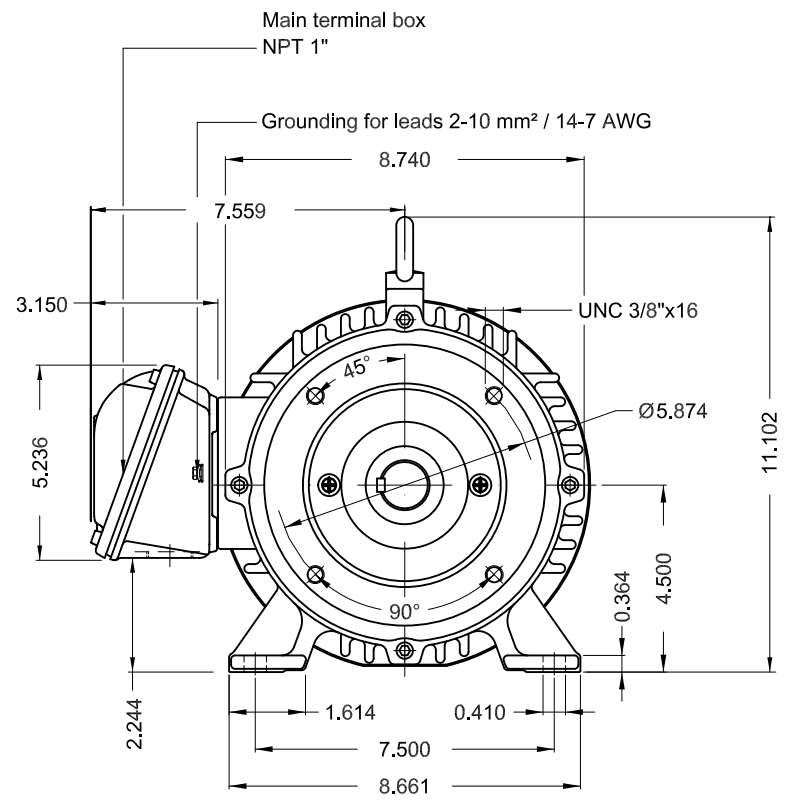
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1 2 3 4 5 6

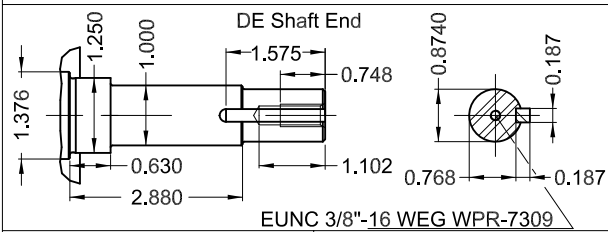
A

B

C



D



E

Color RAL 5009  
 Painting plan 207A  
 Mounting NEMA F-1  
 Mounting B34R(D)

5 HP 04 Poles 60 Hz A

| ECM      | LOC        | SUMMARY OF MODIFICATIONS   | EXECUTED       | CHECKED             | RELEASED | DATE  | VER   |
|----------|------------|--|----------------|---------------------|----------|-------|-------|
| EXECUTED | HYBRISUSER | THREE PH. MOTOR JM/JP/JET PUMP W22 PREM. EFF.<br>FRAME 182/4JM IP55 TEFC |                |                     |          |       |       |
| CHECKED  |            |  |                |                     |          |       |       |
| RELEASED |            |  |                |                     |          |       |       |
| REL DT.  | WMO        |  | Jaragua do Sul | Product Engineering | WDD      | SHEET | 1 / 1 |



**W22**

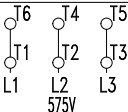
CC029A

® Inverter Duty Motor  
Severe Duty

11570361

MADE IN BRAZIL MODEL 00518ET3H184JM-W22

|                                      |            |                 |                           |          |         |
|--------------------------------------|------------|-----------------|---------------------------|----------|---------|
| PH 3                                 | FR 182/4JM | HP(kw) 5.0(3.7) | Hz 60                     | SF 1.25  | PF 0.80 |
| V 575                                | A 5.16     | RPM 1755        | INS. CL.F $\Delta$ T 80 K |          |         |
| NEMA NOM EFF 89.5 % DES B DUTY CONT. |            |                 |                           | AMB 40°C |         |
| ENCL TEFC                            | IP55       | SFA 6.45        | ALT 1000 m.a.s.l.         |          |         |
|                                      |            |                 |                           |          | CODE J  |



MOBIL POLYREX EM

101 Lbs

Class I, Div 2, Gr. A, B, C and D - T3

Class I, Zone 2, IIC - T3

Class II, Div 2, Gr. F and G - T5

For use on PWM, Gr. A, B, C, D, F and G

VT1000:1, CT20:1, 1.0SF, T4A

FOR SAFE AREA  
MOD.TE1BFOXON