

**NEMA**

**Model GRC2502F**  
MFG PN: T449T 250U2B

# Model GRC2502F

## Product Data Package



| MODEL    | HP  | RPM  | VOLTAGE | PHASE | Hz | FRAME | MOUNT | ENCLOSURE |
|----------|-----|------|---------|-------|----|-------|-------|-----------|
| GRC2502F | 250 | 3570 | 575     | 3     | 60 | 449TS | Rigid | TEFC      |

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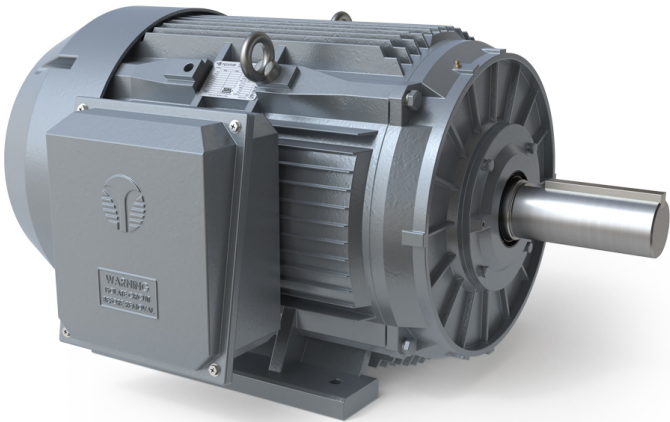
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# NEMA

**Model GRC2502F**  
**MFG PN: T449T 250U2B**

| ELECTRICAL DATA                     |        |                            |
|-------------------------------------|--------|----------------------------|
| Rated Motor Output Power            | 250    | HP                         |
|                                     | -      | kW                         |
| Rated Motor Speed                   | 3570   | r/min 60Hz                 |
|                                     | -      | r/min 50Hz                 |
| Rated Motor Voltage (+/-10%)        | 575    | V/60Hz                     |
|                                     | -      | V/50Hz                     |
| Rated Motor Current                 | 212.47 | A (I <sub>n</sub> ) @ 60Hz |
|                                     | -      | A (I <sub>n</sub> ) @ 50Hz |
| Phase                               | 3      | Ø                          |
| Locked Rotor Current @ High Voltage | 1737.6 | A (I <sub>n</sub> ) @ 60Hz |
| FI Current @ 208V                   | -      | A (I <sub>n</sub> ) @ 60Hz |
| Service Factor                      | 1.15   | @ 60Hz                     |
|                                     | 1      | @ 50Hz                     |
| KVA Code                            | K      | 60Hz                       |
|                                     | -      | 50Hz                       |
| Nominal Efficiency                  | 95.8   | % @ 60Hz                   |
| Nominal Power Factor                | 0.9    | cosΦ @ 60Hz                |
| Leads (Qty, Size)                   | 6      | 1                          |
| Connection                          | D      | -                          |
| Coil Resistance                     | 14.1   | Ω                          |
| Start Capacitor                     | -      | µF/V                       |
| Run Capacitor                       | -      | µF/V                       |
| VFD DUTY (S.F. 1.0)                 | RATIO  | Hz                         |
| Variable Torque                     | 30:1   | 2 - 60                     |
| Constant Torque                     | 15:1   | 4 - 60                     |
| FULL LOAD TEMPERATURE RISE          |        |                            |
| Full Load Temperature Rise          | 75.3   | °C @ 60Hz                  |
|                                     | 100.3  | °C @ 50Hz                  |

| GENERAL DATA                        |                  |           |
|-------------------------------------|------------------|-----------|
| Frame Size                          | 449TS            |           |
| Enclosure                           | TEFC             |           |
| Mounting                            | Rigid            |           |
| Approximate Weight (lbs.)           | 2077 lbs.        |           |
| Casing Material / Fan Cover         | Cast Iron        | Cast Iron |
| Shaft Material                      | 4140             |           |
| NEMA Design                         | A                |           |
| Degree of Protection (IP)           | 55               |           |
| Insulation Class / Temp Rise (60Hz) | F                | B         |
| Tropicalization                     | YES              |           |
| Duty                                | Cont. / S1       |           |
| Conduit Box Location                | F1               |           |
| Feet Removable / Double Drilled     | NO               | YES       |
| Paintwork                           | 7024             |           |
|                                     | Graphite Gray    |           |
| MECHANICAL DATA                     |                  |           |
| Bearing DE Side                     | 6316 C3          |           |
| Bearing ODE Side                    | 6316 C3          |           |
| Grease Type                         | Mobil Polyrex EM |           |
| Compensation Ring (wavy washer)     | NDE              |           |
| Moment of Inertia (lb-ft²)          | 38.67            |           |
| Sound Pressure @ 3 FT dBA           | 96.1             |           |
| SITE CONDITIONS                     |                  |           |
| Ambient Temperature (°C)            | 40               |           |
| Meters Above Sea Level (MASL)       | 1000             |           |
| HAZARDOUS LOCATIONS                 |                  |           |
| CSA Certified                       | A, B, C & D      |           |
| Temperature Code                    | T3A              | -         |

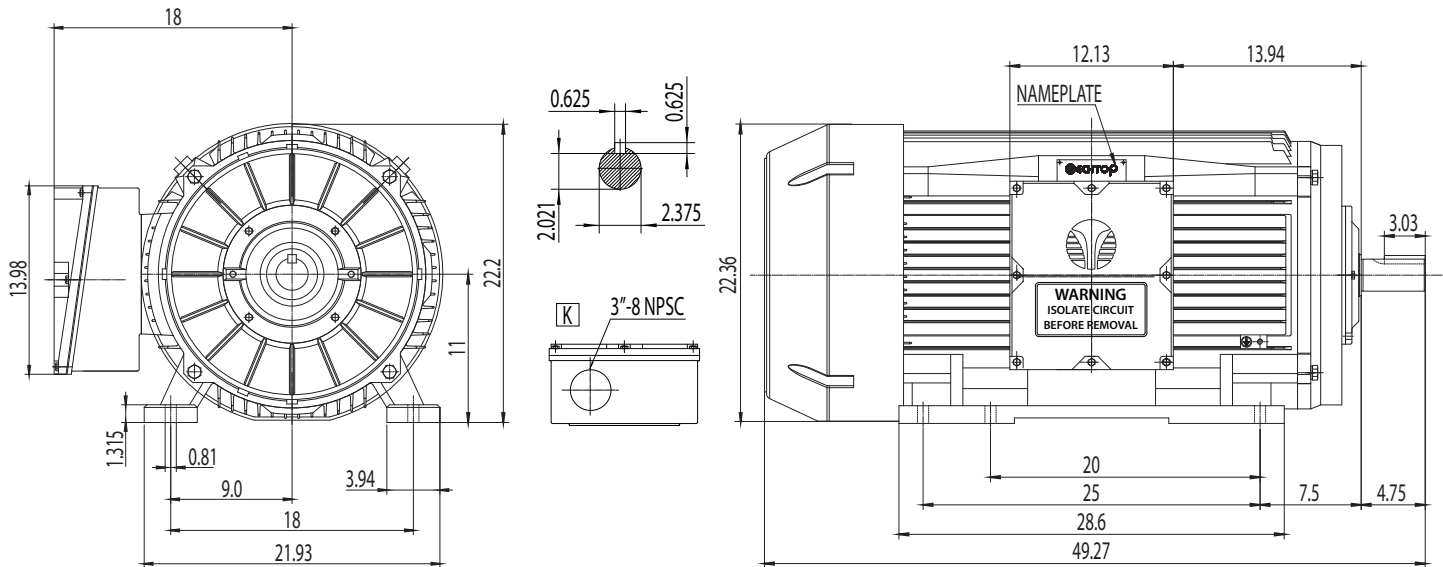
**Questions? Call 1.888.286.1820**

**DATA SHEET: THREE-PHASE SQUIRREL CAGE MOTOR**  
**PREMIUM T-FRAME CAST IRON MOTORS**



**NEMA**

**Model GRC2502F**  
**MFG PN: T449T 250U2B**



| NAMEPLATE DATA             | 60Hz       | 50Hz |
|----------------------------|------------|------|
| Horse Power                | 250        | 250  |
| RPM                        | 3570       | -    |
| Voltage                    | 575        | -    |
| Full Load Amps             | 212.47     | -    |
| Service Factor             | 1.15       | 1    |
| KVA Code                   | K          | -    |
| Full Load Amps (208V)      | -          | -    |
| Nominal Efficiency         | 95.8       | -    |
| Nominal Power Factor       | 0.9        | -    |
| Design                     | A          |      |
| Frame                      | 449TS      |      |
| Enclosure Type             | TEFC       |      |
| IP Rating                  | 55         |      |
| Duty                       | Cont. / S1 |      |
| Insulation Class           | F          |      |
| Ambient Rating             | 40         |      |
| Drive End Bearing          | 6316 C3    |      |
| Opposite Drive End Bearing | 6316 C3    |      |
| Weight (lbs)               | 2077       |      |

**NAMEPLATE LAYOUT**

|                                                           |      |                                        |                     |
|-----------------------------------------------------------|------|----------------------------------------|---------------------|
|                                                           |      | <b>INDUSTRIAL THREE PHASE MOTOR</b>    |                     |
|                                                           |      | INVERTER DUTY 15:1 CT 30:1 VT - 1.0 SF |                     |
| MODEL                                                     |      |                                        | TECHTOPCANADA.COM   |
| <b>NEMA Premium</b>                                       | 60Hz | 50Hz                                   | MFG PN              |
| HP                                                        |      |                                        | MFG DATE            |
| RPM                                                       |      |                                        | SER #               |
| VOLT                                                      |      |                                        | DESIGN              |
| FLA                                                       |      |                                        | FRAME               |
| SF                                                        |      |                                        | ENCL                |
| KVA CODE                                                  |      |                                        | IP                  |
| NOM.EFF                                                   |      |                                        | DUTY                |
| <b>BEARING SIZE</b><br>DE ODE<br>GREASE: MOBIL POLYREX EM |      |                                        | INS CL              |
|                                                           |      |                                        | AMB                 |
|                                                           |      |                                        | WEIGHT              |
| MADE IN CHINA CLASS 1, DIV 2, GROUPS A, B, C AND D        |      |                                        | lbs                 |
|                                                           |      |                                        | IEEE 45 MARINE DUTY |

| VFD DUTY (S.F. 1.0) | RATIO | Hz*    |
|---------------------|-------|--------|
| Variable Torque     | 30:1  | 2 - 60 |
| Constant Torque     | 15:1  | 4 - 60 |

\*For max speed please contact Techtop Canada

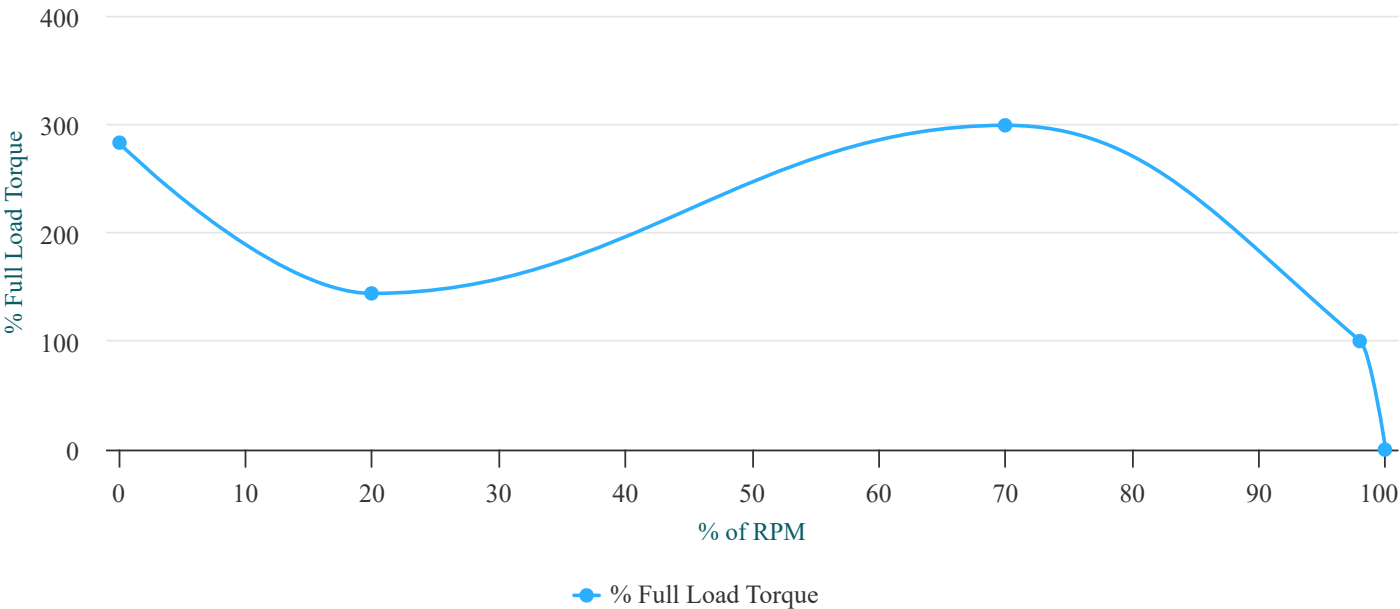
| HAZARDOUS LOCATIONS | CSA CERTIFIED   |
|---------------------|-----------------|
| Class / Division    | Class I, Div. 2 |
| Groups              | A, B, C & D     |

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**NEMA**

**Model GRC2502F**  
MFG PN: T449T 250U2B

**Torque Speed (T-n) Curve**



**PERFORMANCE LOAD VALUES, HIGH VOLTAGE, 60Hz**

| TORQUE VALUES       | TORQUE (lb-ft) | TORQUE (% FULL LOAD) | PERFORMANCE VALUES   |        |
|---------------------|----------------|----------------------|----------------------|--------|
| Locked Rotor Torque | 1040.8         | 283                  | Start Configuration  | DOL    |
| Pull-Up Torque      | 529.6          | 144                  | Starting Current (A) | 1737.6 |
| Breakdown Torque    | 1099.7         | 299                  | No-Load Current (A)  | 34.7   |
| Full Load Torque    | 367.8          | 100                  | No-Load Power Factor | -      |

**TYPICAL PERFORMANCE - NOT GUARANTEED VALUES**

| % OF RATED LOAD     | 25    | 50    | 75     | 100    | 125    | S.F. 1.15 |
|---------------------|-------|-------|--------|--------|--------|-----------|
| Line Amperes (A)    | 41.7  | 55.8  | 73.2   | 93.2   | 115    | 106.2     |
| Efficiency (%)      | 93.3  | 93.3  | 95.8   | 95.6   | 95.1   | 95.1      |
| Speed (r/min)       | 3593  | 3587  | 3580   | 3573   | 3564   | 3564      |
| Power Factor (cosΦ) | 0.78  | 0.89  | 0.92   | 0.93   | 0.92   | 0.92      |
| Input Power (kW)    | 49.99 | 97.64 | 145.99 | 195.13 | 245.13 | 245.13    |

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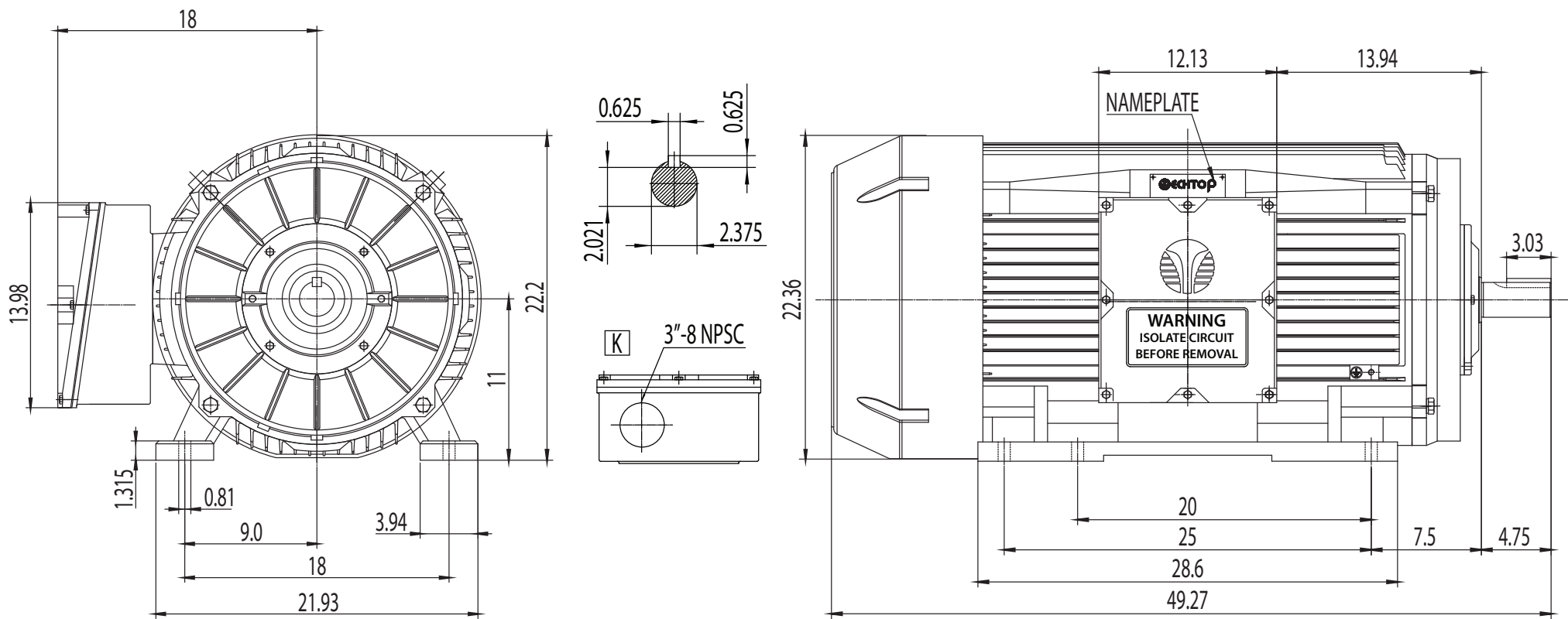
- NOTES:
- 1. CCW ROTATION FACING ODE FOR CONNECTIONS SHOWN
  - 2. TO REVERSE ROTATION, SWAP ANY TWO INPUT LINES
  - 3. WHEN MOTOR IS IN F1 POSITION, LEADS INDICATED WITH “\*” EXIT THE CASING ABOVE THE CENTER LINE OF THE MOTOR, THE REMAINING LEADS EXIT BELOW THE CENTER LINE
  - 4. LEADS MUST BE NUMBERED AND COLORED AS SHOWN
  - 5. DIAGRAMS FOR REFERENCE ONLY



|                     |            |
|---------------------|------------|
| DRAWING NUMBER:     | NEMA-3-6-D |
| CONNECTION:         | D          |
| NUMBER OF LEADS:    | 6          |
| THERMAL PROTECTION: | -          |

NEMA 3Ø D 6-Lead Single Voltage

|                                  |          |
|----------------------------------|----------|
| ISSUED DATE                      | 06/06/25 |
| PREMIUM T-FRAME CAST IRON MOTORS |          |



NEMA Premium TEFC 449TS

|                  |                        |                                  |          |
|------------------|------------------------|----------------------------------|----------|
| DRAWING NUMBER:  | GR3-CI-TF-447(9)TS-CFC | ISSUED DATE                      | 06/06/25 |
| DIMENSIONS:      | Inches                 | PREMIUM T-FRAME CAST IRON MOTORS |          |
| MOUNTING:        | Rigid                  |                                  |          |
| CASING MATERIAL: | Cast Iron              |                                  |          |