

**NEMA**

**Model GRC0204F-TC**  
MFG PN: T256T20U4B

# Model GRC0204F-TC

## Product Data Package



| MODEL       | HP | RPM  | VOLTAGE | PHASE | Hz | FRAME | MOUNT          | ENCLOSURE |
|-------------|----|------|---------|-------|----|-------|----------------|-----------|
| GRC0204F-TC | 20 | 1770 | 575     | 3     | 60 | 256TC | Rigid/C-Flange | TEFC      |

### Toronto

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### Moncton

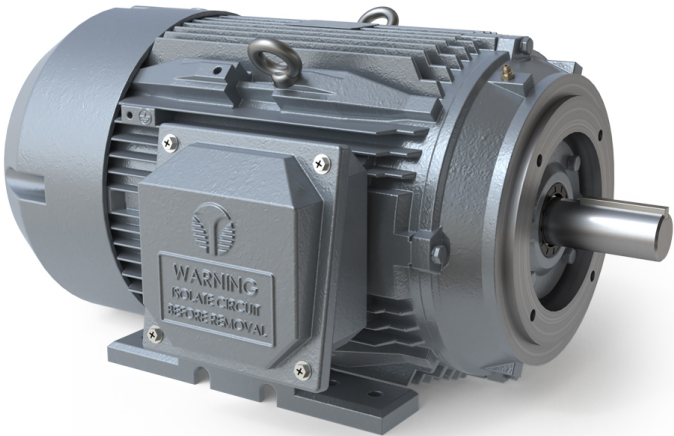
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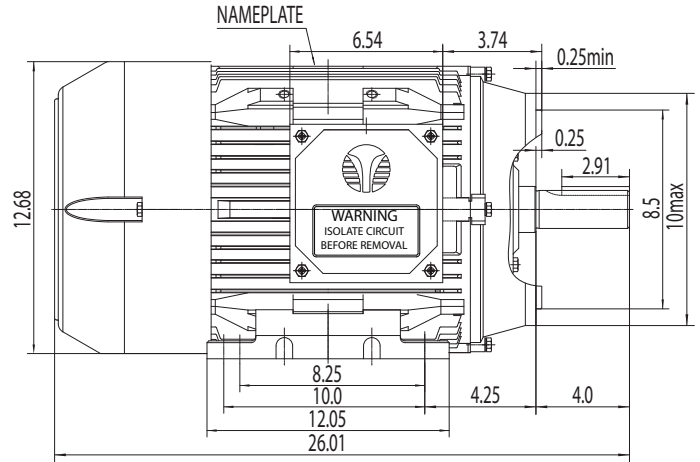
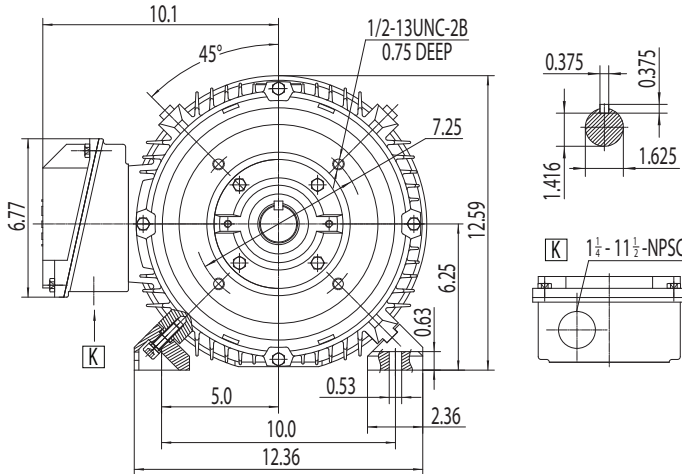
| ELECTRICAL DATA                     |        |                            |
|-------------------------------------|--------|----------------------------|
| Rated Motor Output Power            | 20     | HP                         |
|                                     | -      | kW                         |
| Rated Motor Speed                   | 1770   | r/min 60Hz                 |
|                                     | -      | r/min 50Hz                 |
| Rated Motor Voltage (+/-10%)        | 575    | V/60Hz                     |
|                                     | -      | V/50Hz                     |
| Rated Motor Current                 | 18.74  | A (I <sub>n</sub> ) @ 60Hz |
|                                     | -      | A (I <sub>n</sub> ) @ 50Hz |
| Phase                               | 3      | Ø                          |
| Locked Rotor Current @ High Voltage | 210.88 | A (I <sub>n</sub> ) @ 60Hz |
| FI Current @ 208V                   | -      | A (I <sub>n</sub> ) @ 60Hz |
| Service Factor                      | 1.25   | @ 60Hz                     |
|                                     | 1      | @ 50Hz                     |
| KVA Code                            | K      | 60Hz                       |
|                                     | -      | 50Hz                       |
| Nominal Efficiency                  | 93     | % @ 60Hz                   |
| Nominal Power Factor                | 0.86   | cosΦ @ 60Hz                |
| Leads (Qty, Size)                   | 6      | 14                         |
| Connection                          | D      | -                          |
| Coil Resistance                     | 0.367  | 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          | 50.6   | °C @ 60Hz                  |
|                                     | 69.1   | °C @ 50Hz                  |

| GENERAL DATA                        |                  |           |
|-------------------------------------|------------------|-----------|
| Frame Size                          | 256TC            |           |
| Enclosure                           | TEFC             |           |
| Mounting                            | Rigid/C-Flange   |           |
| Approximate Weight (lbs.)           | 347.7 lbs.       |           |
| Casing Material / Fan Cover         | Cast Iron        | Cast Iron |
| Shaft Material                      | -                |           |
| 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     | YES              | YES       |
| Paintwork                           | 7024             |           |
|                                     | Graphite Gray    |           |
| MECHANICAL DATA                     |                  |           |
| Bearing DE Side                     | 6309 C3          |           |
| Bearing ODE Side                    | 6309 C3          |           |
| Grease Type                         | Mobil Polyrex EM |           |
| Compensation Ring (wavy washer)     | NDE              |           |
| Moment of Inertia (lb-ft²)          | 2.78             |           |
| Sound Pressure @ 3 FT dBA           | 75.6             |           |
| SITE CONDITIONS                     |                  |           |
| Ambient Temperature (°C)            | 40               |           |
| Meters Above Sea Level (MASL)       | 1000             |           |
| HAZARDOUS LOCATIONS                 |                  |           |
| CSA Certified                       | A, B, C & D      |           |
| Temperature Code                    | T3               | -         |

**Questions? Call 1.888.286.1820**

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| NAMEPLATE DATA             | 60Hz       | 50Hz |
|----------------------------|------------|------|
| Horse Power                | 20         | 20   |
| RPM                        | 1770       | -    |
| Voltage                    | 575        | -    |
| Full Load Amps             | 18.74      | -    |
| Service Factor             | 1.25       | 1    |
| KVA Code                   | K          | -    |
| Full Load Amps (208V)      | -          | -    |
| Nominal Efficiency         | 93         | -    |
| Nominal Power Factor       | 0.86       | -    |
| Design                     | A          |      |
| Frame                      | 256TC      |      |
| Enclosure Type             | TEFC       |      |
| IP Rating                  | 55         |      |
| Duty                       | Cont. / S1 |      |
| Insulation Class           | F          |      |
| Ambient Rating             | 40         |      |
| Drive End Bearing          | 6309 C3    |      |
| Opposite Drive End Bearing | 6309 C3    |      |
| Weight (lbs)               | 347.7      |      |

NAMEPLATE LAYOUT

|                                                    |                   |                                                                        |          |
|----------------------------------------------------|-------------------|------------------------------------------------------------------------|----------|
| <b>TECHTOP</b>                                     |                   | INDUSTRIAL THREE PHASE MOTOR<br>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>                                |                   | INS CL                                                                 |          |
| DE                                                 | ODE               | AMB                                                                    |          |
| GREASE: MOBIL POLYREX EM                           |                   | WEIGHT                                                                 |          |
| MADE IN CHINA CLASS 1, DIV 2, GROUPS A, B, C AND D |                   | 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

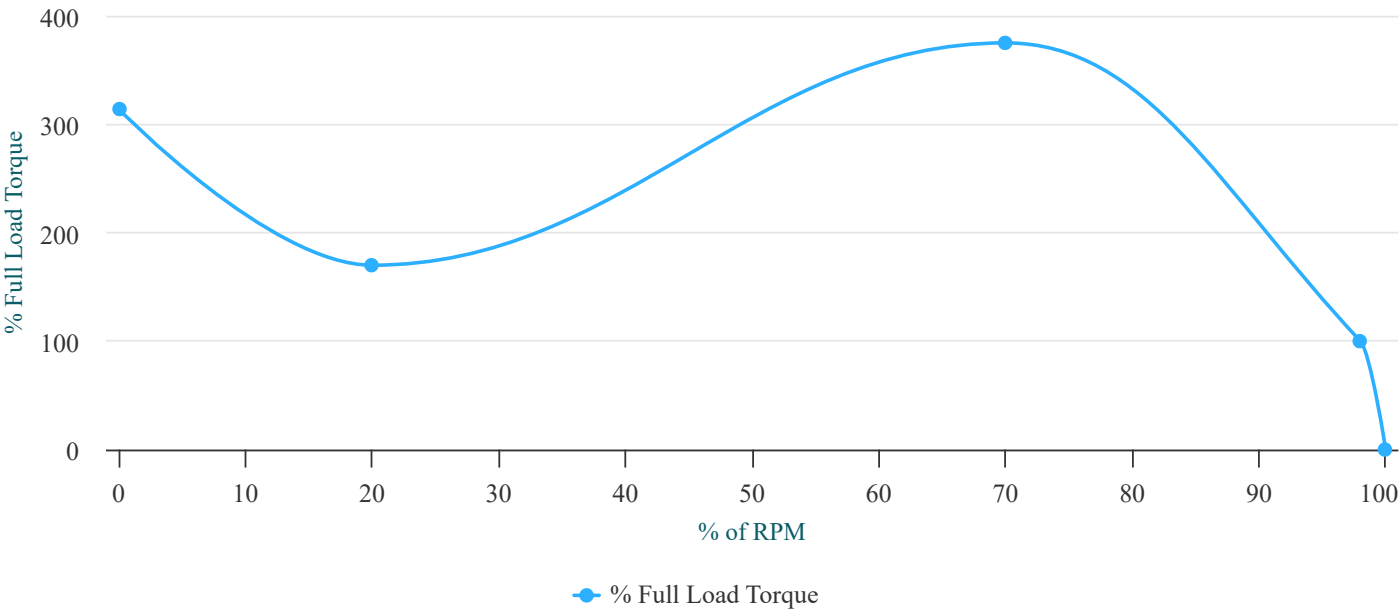
| HAZARDOUS LOCATIONS | CSA CERTIFIED   |
|---------------------|-----------------|
| Class / Division    | Class I, Div. 2 |
| Groups              | A, B, C & D     |

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



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

| TORQUE VALUES       | TORQUE (lb-ft) | TORQUE (% FULL LOAD) | PERFORMANCE VALUES   |        |
|---------------------|----------------|----------------------|----------------------|--------|
| Locked Rotor Torque | 186.3          | 314                  | Start Configuration  | DOL    |
| Pull-Up Torque      | 100.9          | 170                  | Starting Current (A) | 210.88 |
| Breakdown Torque    | 222.5          | 375                  | No-Load Current (A)  | 10.4   |
| Full Load Torque    | 59.3           | 100                  | No-Load Power Factor | -      |

**TYPICAL PERFORMANCE - NOT GUARANTEED VALUES**

| % OF RATED LOAD     | 25   | 50   | 75    | 100  | 125  | S.F. 1.25 |
|---------------------|------|------|-------|------|------|-----------|
| Line Amperes (A)    | 11.2 | 13.5 | 16.6  | 20.4 | 24.5 | 24.5      |
| Efficiency (%)      | 88   | 92.1 | 92.8  | 92.6 | 91.9 | 91.9      |
| Speed (r/min)       | 1795 | 1789 | 1783  | 1777 | 1771 | 1771      |
| Power Factor (cosΦ) | 0.38 | 0.6  | 0.73  | 0.8  | 0.83 | 0.83      |
| Input Power (kW)    | 4.26 | 8.14 | 12.12 | 16.2 | 20.4 | 20.4      |

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- NOTES:
- CCW ROTATION FACING ODE FOR CONNECTIONS SHOWN
  - TO REVERSE ROTATION, SWAP ANY TWO INPUT LINES
  - 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
  - LEADS MUST BE NUMBERED AND COLORED AS SHOWN
  - 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                      | 26/05/25 |
| PREMIUM T-FRAME CAST IRON MOTORS |          |



## NEMA Premium TEFC 256TC

|                  |                     |                                  |          |
|------------------|---------------------|----------------------------------|----------|
| DRAWING NUMBER:  | GR3-CI-TF-256TC-CFC | ISSUED DATE                      | 26/05/25 |
| DIMENSIONS:      | Inches              |                                  |          |
| MOUNTING:        | Rigid/C-Flange      | PREMIUM T-FRAME CAST IRON MOTORS |          |
| CASING MATERIAL: | Cast Iron           |                                  |          |