

# NIDEC MOTOR CORPORATION

8050 WEST FLORISSANT AVE.  
ST. LOUIS, MO 63136



DATE: 2/5/2016

P.O. NO.: CY69  
Order/Line NO.: 20387 MN 100

TO:

Model Number: CY69  
Catalog Number:  
Corro-Duty Premium Eff. Config  
CONF,MOTOR,CORRO-DUTY PRE EFF

REVISIONS:  
(NONE)

ALL DOCUMENTS HEREIN ARE CONSIDERED CERTIFIED BY NIDEC MOTOR CORPORATION.  
THANK YOU FOR YOUR ORDER AND THE OPPORTUNITY TO SERVE YOU.

## Features:

Horsepower ..... 00060.00 ~ KW: 44.76  
Enclosure ..... TEFC  
Poles ..... 06 ~ RPM: 1200  
Frame Size ..... 404~T  
Phase/Frequency/Voltage.. 3~060~460 ~ Random Wound  
Service Factor ..... 1.15  
Insulation Class ..... Class "F" ~ Insulife 2000  
Altitude In Feet (Max) .. 3300 Ft.(1000 M)  
Ambient In Degree C (Max) +40 C  
Assembly Position ..... "F-1" Assembly Position  
Efficiency Class ..... Premium Efficiency  
Application ..... Unknown  
Customer Part Number ....  
"AK" Dimension (Inches).. NA  
Temperature Rise (Sine Wave): "B" Rise @ 1.0 SF (Resist)  
NEMA Design ..... B  
KVA Code Letter ..... "G"  
Starting Method ..... Direct-On-Line Start  
Duty Cycle ..... Continuous Duty  
Efficiency Value ..... 93.6 % ~ Guaranteed  
Load Inertia (lb-ft<sup>2</sup>): NEMA ~ NEMA Inertia: 735.00 ~ 1.00  
Number Of Starts Per Hour: NEMA  
Motor Type Code ..... TCE  
Rotor Inertia (LB-FT<sup>2</sup>) ..... 37.6 LB-FT<sup>2</sup>  
Qty. of Bearings PE (Shaft) 1  
Qty. of Bearings SE (OPP) 1  
Bearing Number PE (Shaft) 6316-J/C3  
Bearing Number SE (OPP) 6316-J/C3

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**Accessories:**

Cast Iron Fan Cover  
Direct Connected To Load  
Corro-Duty  
Clockwise Rotation FODE  
Ground Lug In Conduit Box  
Horizontal Lifting Lugs  
Precision Balance

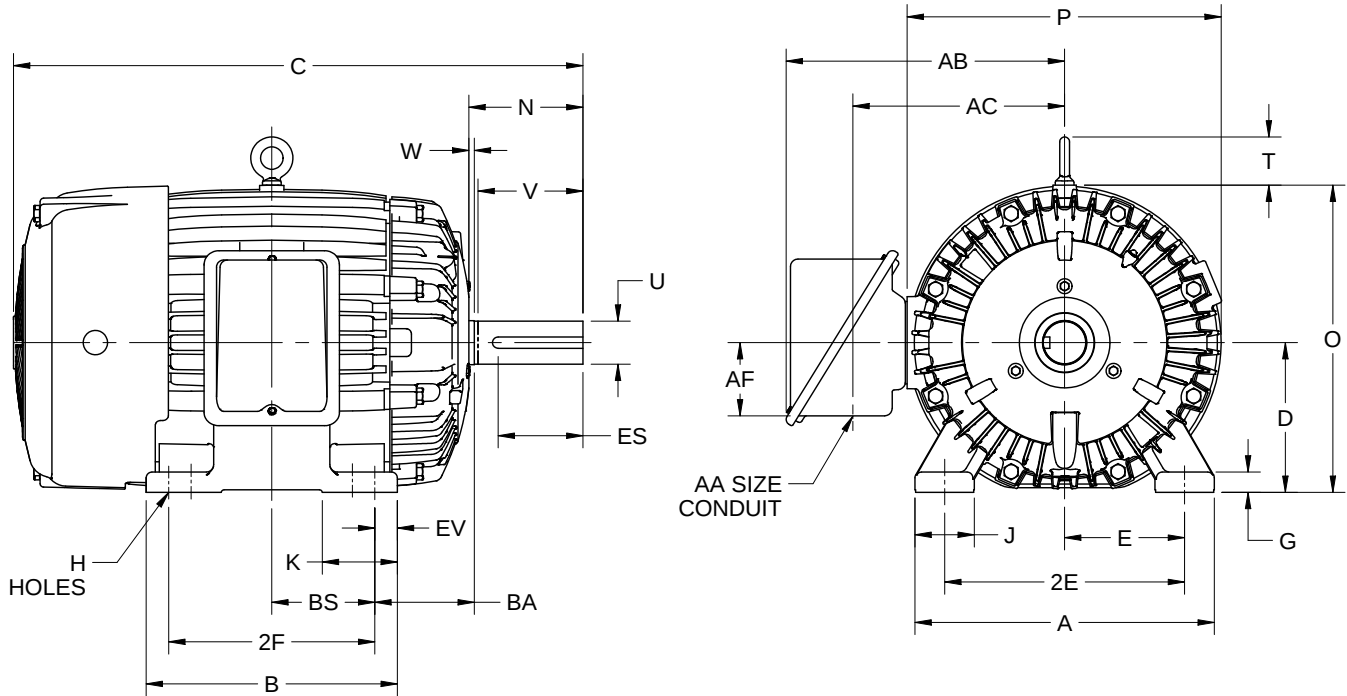
Standard Leadtime: REFER TO OFFICE  
Est. Weight (lbs ea): 1160 ~ F.O.B.: St. Louis, MO

**USE THE DATA PROVIDED BELOW TO SELECT THE APPROPRIATE DIMENSION PRINT**

|                         |       |
|-------------------------|-------|
| <b>Horsepower</b>       | 60    |
| <b>Pole(s)</b>          | 06    |
| <b>Voltage(s)</b>       | 460   |
| <b>Frame Size</b>       | 404T  |
| <b>Shaft U Diameter</b> | 2.875 |
| <b>Outlet Box AF</b>    | 4.88  |
| <b>Outlet Box AA</b>    | 3.00  |

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|                                 |                                                                      |                          |
|---------------------------------|----------------------------------------------------------------------|--------------------------|
| EFFECTIVE:<br><b>10-OCT-14</b>  | <b>DIMENSION PRINT</b><br>TEFC<br>FRAME: 404, 405T<br>BASIC TYPE: TC | PRINT:<br><b>07-3038</b> |
| SUPERSEDES:<br><b>02-OCT-12</b> |                                                                      | SHEET:<br><b>1 OF 1</b>  |



ALL DIMENSIONS ARE IN INCHES AND MILLIMETERS

|  |    | A     | B     | C     | D<br>-.06 | E    | 2E<br>±.03 | G    | H<br>+.05 | J    |
|--|----|-------|-------|-------|-----------|------|------------|------|-----------|------|
|  | IN | 19.75 | 16.75 | 38.00 | 10.00     | 8.00 | 16.00      | 1.38 | .81       | 3.75 |
|  | MM | 502   | 425   | 965   | 254       | 203  | 406        | 35   | 21        | 95   |

|  |    | K    | N    | O     | P <sup>2</sup> | T    | U<br>-.001 | V<br>MIN | W   | AA    |
|--|----|------|------|-------|----------------|------|------------|----------|-----|-------|
|  | IN | 5.00 | 7.38 | 20.50 | 20.94          | 3.22 | 2.875      | 7.00     | .13 | 3 NPT |
|  | MM | 127  | 187  | 521   | 532            | 82   | 73.03      | 178      | 3   |       |

|  |    | AB    | AC    | AF   | BA   | BS   | ES<br>MIN | EV   | SQ<br>KEY |
|--|----|-------|-------|------|------|------|-----------|------|-----------|
|  | IN | 18.56 | 14.13 | 4.88 | 6.63 | 6.88 | 5.66      | 1.50 | .750      |
|  | MM | 471   | 359   | 124  | 168  | 175  | 144       | 38   | 19.05     |

|  |    | FRAME | 2F<br>±.03 |
|--|----|-------|------------|
|  | IN | 404T  | 12.25      |
|  | MM |       | 311        |
|  | IN | 405T  | 13.75      |
|  | MM |       | 349        |

1. DIMENSIONS MAY VARY .25" DUE TO CASTING AND/OR FABRICATION VARIATIONS.
2. LARGEST MOTOR WIDTH
3. TOLERANCES ARE SHOWN IN INCHES.
4. CONDUIT BOX MAY BE LOCATED ON EITHER SIDE OF MOTOR. CONDUIT OPENINGS MAY BE LOCATED IN STEPS OF 90 DEGREES REGARDLESS OF LOCATION. STANDARD AS SHOWN WITH CONDUIT OPENING DOWN.

07-3038/A

**Nidec Motor Corporation**  
St. Louis, Missouri

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CONSENT OF NIDEC MOTOR CORPORATION



ISSUED BY  
**R. KING**  
APPROVED BY  
**J. O'BRIEN**

IHP\_DP\_NMCA (MAR-2011) SOLIDEDGE

# NAMEPLATE DATA

|                                                 |      |                      |      |                      |      |                    |      |
|-------------------------------------------------|------|----------------------|------|----------------------|------|--------------------|------|
| CATALOG NUMBER                                  |      |                      |      | NAMEPLATE PART #:    |      | 2022000-002        |      |
| MODEL                                           | CY69 | FR                   | 404T | TYPE                 | TCE  | ENCL               | TEFC |
| SHAFT<br>END BRG                                |      | 6316-J/C3 - QTY 1    |      | OPP<br>END BRG       |      | 6316-J/C3 - QTY 1  |      |
| PH                                              | 3    | MAX<br>AMB           | 40 C | ID#                  |      |                    |      |
| INSUL<br>CLASS                                  | F    | Asm.<br>Pos          | F1   | DUTY                 | CONT |                    |      |
| HP                                              | 60   | RPM                  | 1190 | HP                   |      | RPM                |      |
| VOLTS                                           | 460  |                      |      | VOLTS                |      |                    |      |
| FL<br>AMPS                                      | 70.0 |                      |      | FL<br>AMPS           |      |                    |      |
| SF<br>AMPS                                      | 81.0 |                      |      | SF<br>AMPS           |      |                    |      |
| SF                                              | 1.15 | DESIGN               | B    | CODE                 | G    |                    |      |
| NEMA NOM<br>EFFICIENCY                          | 94.1 | NOM<br>PF            | 84.9 | KiloWatt             | 44.8 |                    |      |
| GUARANTEED<br>EFFICIENCY                        | 93.6 | MAX<br>KVAR          | 13.3 | HZ                   | 60   |                    |      |
| <b>HAZARDOUS LOCATION DATA (IF APPLICABLE):</b> |      |                      |      |                      |      |                    |      |
| DIVISION                                        |      |                      |      | CLASS I              |      |                    |      |
| TEMP CODE                                       |      |                      |      | CLASS II             |      |                    |      |
| <b>VFD DATA (IF APPLICABLE):</b>                |      |                      |      |                      |      |                    |      |
| VOLTS                                           |      |                      |      | TORQUE 2             |      |                    |      |
| AMPS                                            |      |                      |      | VFD LOAD TYPE 2      |      |                    |      |
| TORQUE 1                                        |      |                      |      | VFD HERTZ RANGE 2    |      |                    |      |
| VFD LOAD TYPE 1                                 |      |                      |      | VFD SPEED RANGE 2    |      |                    |      |
| VFD HERTZ RANGE 1                               |      |                      |      |                      |      |                    |      |
| VFD SPEED RANGE 1                               |      |                      |      |                      |      |                    |      |
| SERVICE FACTOR                                  |      |                      |      | FL SLIP              |      |                    |      |
| NO. POLES                                       |      | 6                    |      | MAGNETIZING AMPS     |      | 19.6               |      |
| VECTOR MAX RPM                                  |      |                      |      | Encoder PPR          |      |                    |      |
| Radians/ Seconds                                |      |                      |      | Encoder Volts        |      |                    |      |
| <b>TEAO DATA (IF APPLICABLE):</b>               |      |                      |      |                      |      |                    |      |
| HP (AIR OVER)                                   |      | HP (AIR OVER M/S)    |      | RPM (AIR OVER)       |      | RPM (AIR OVER M/S) |      |
| FPM AIR VELOCITY                                |      | FPM AIR VELOCITY M/S |      | FPM AIR VELOCITY SEC |      |                    |      |

**ADDITIONAL NAMEPLATE DATA:**

|                           |                     |                           |        |
|---------------------------|---------------------|---------------------------|--------|
| Decal / Plate             | WD=477257           | Customer PN               |        |
| Notes                     |                     | Non Rev Ratchet           |        |
| Max Temp Rise             | 80C RISE/RES@1.00SF | OPP/Upper Oil Cap         | GREASE |
| Thermal (WDG)             |                     | SHAFT/Lower Oil Cap       | GREASE |
| Altitude                  |                     |                           |        |
| Regulatory Notes          |                     | Regulatory Compliance     |        |
| COS                       |                     | Marine Duty               |        |
| Balance                   | 1.27 MM/SEC         | Arctic Duty               |        |
| 3/4 Load Eff.             | 94.7                | Inrush Limit              |        |
| Motor Weight (LBS)        | 526.64 KG           | Direction of Rotation     |        |
| Sound Level               |                     | Special Note 1            |        |
| Vertical Thrust (LBS)     |                     | Special Note 2            |        |
| Thrust Percentage         |                     | Special Note 3            |        |
| Bearing Life              |                     | Special Note 4            |        |
| Starting Method           |                     | Special Note 5            |        |
| Number of Starts          |                     | Special Note 6            |        |
| 200/208V 60Hz Max Amps    |                     | SH Max. Temp.             |        |
| 190V 50 hz Max Amps       |                     | SH Voltage                |        |
| 380V 50 Hz Max Amps       |                     | SH Watts                  |        |
| NEMA Inertia              |                     | Load Inertia              |        |
| Sumpheater Voltage        |                     | Sumpheater Wattage        |        |
| Special Accessory Note 1  |                     | Special Accessory Note 16 |        |
| Special Accessory Note 2  |                     | Special Accessory Note 17 |        |
| Special Accessory Note 3  |                     | Special Accessory Note 18 |        |
| Special Accessory Note 4  |                     | Special Accessory Note 19 |        |
| Special Accessory Note 5  |                     | Special Accessory Note 20 |        |
| Special Accessory Note 6  |                     | Special Accessory Note 21 |        |
| Special Accessory Note 7  |                     | Special Accessory Note 22 |        |
| Special Accessory Note 8  |                     | Special Accessory Note 23 |        |
| Special Accessory Note 9  |                     | Special Accessory Note 24 |        |
| Special Accessory Note 10 |                     | Special Accessory Note 25 |        |
| Special Accessory Note 11 |                     | Special Accessory Note 26 |        |
| Special Accessory Note 12 |                     | Special Accessory Note 27 |        |
| Special Accessory Note 13 |                     | Special Accessory Note 28 |        |
| Special Accessory Note 14 |                     | Special Accessory Note 29 |        |
| Special Accessory Note 15 |                     | Special Accessory Note 30 |        |

**NIDEC MOTOR CORPORATION**  
ST. LOUIS, MO



TYPICAL NAMEPLATE DATA  
ACTUAL MOTOR NAMEPLATE LAYOUT MAY VARY  
SOME FIELDS MAY BE OMITTED

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## MOTOR PERFORMANCE

| MODEL NO. | CATALOG NO. | PHASE | TYPE | FRAME |
|-----------|-------------|-------|------|-------|
| CY69      | NA          | 3     | TCE  | 404T  |

| ORDER NO. | 20387 | LINE NO. |  |
|-----------|-------|----------|--|
|-----------|-------|----------|--|

|                               |                      |        |
|-------------------------------|----------------------|--------|
| MPI:                          |                      | 173246 |
| HP:                           |                      | 60     |
| POLES:                        |                      | 6      |
| VOLTS:                        |                      | 460    |
| HZ:                           |                      | 60     |
| SERVICE FACTOR:               |                      | 1.15   |
| EFFICIENCY (%):               |                      |        |
|                               | S.F.                 | 93.7   |
|                               | FULL                 | 94.1   |
|                               | 3/4                  | 94.7   |
|                               | 1/2                  | 94.2   |
|                               | 1/4                  | 91.1   |
| POWER FACTOR (%):             |                      |        |
|                               | S.F.                 | 84.9   |
|                               | FULL                 | 84.9   |
|                               | 3/4                  | 83.2   |
|                               | 1/2                  | 77.4   |
|                               | 1/4                  | 59.9   |
|                               | NO LOAD              | 6.1    |
|                               | LOCKED ROTOR         | 30.7   |
| AMPS:                         |                      |        |
|                               | S.F.                 | 81     |
|                               | FULL                 | 70     |
|                               | 3/4                  | 53     |
|                               | 1/2                  | 39     |
|                               | 1/4                  | 25.7   |
|                               | NO LOAD              | 19.6   |
|                               | LOCKED ROTOR         | 430.1  |
| NEMA CODE LETTER              |                      | G      |
| NEMA DESIGN LETTER            |                      | B      |
| FULL LOAD RPM                 |                      | 1190   |
| NEMA NOMINAL / EFFICIENCY (%) |                      | 94.1   |
| GUARANTEED EFFICIENCY (%)     |                      | 93.6   |
| MAX KVAR                      |                      | 13.3   |
| AMBIENT (°C)                  |                      | 40     |
| ALTITUDE (FASL)               |                      | 3300   |
| SAFE STALL TIME-HOT (SEC)     |                      | 30     |
| SOUND PRESSURE (DBA @ 1M)     |                      | 63     |
| TORQUES:                      |                      |        |
|                               | BREAKDOWN{% F.L.}    | 223    |
|                               | LOCKED ROTOR{% F.L.} | 150    |
|                               | FULL LOAD{LB-FT}     | 264.8  |

NEMA Nominal and Guaranteed Efficiencies are up to 3,300 feet above sea level and 25 ° C ambient

The Above Data Is Typical, Sinewave Power Unless Noted Otherwise

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ST. LOUIS, MO

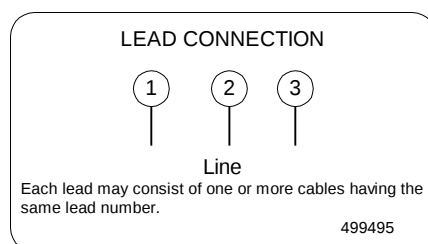
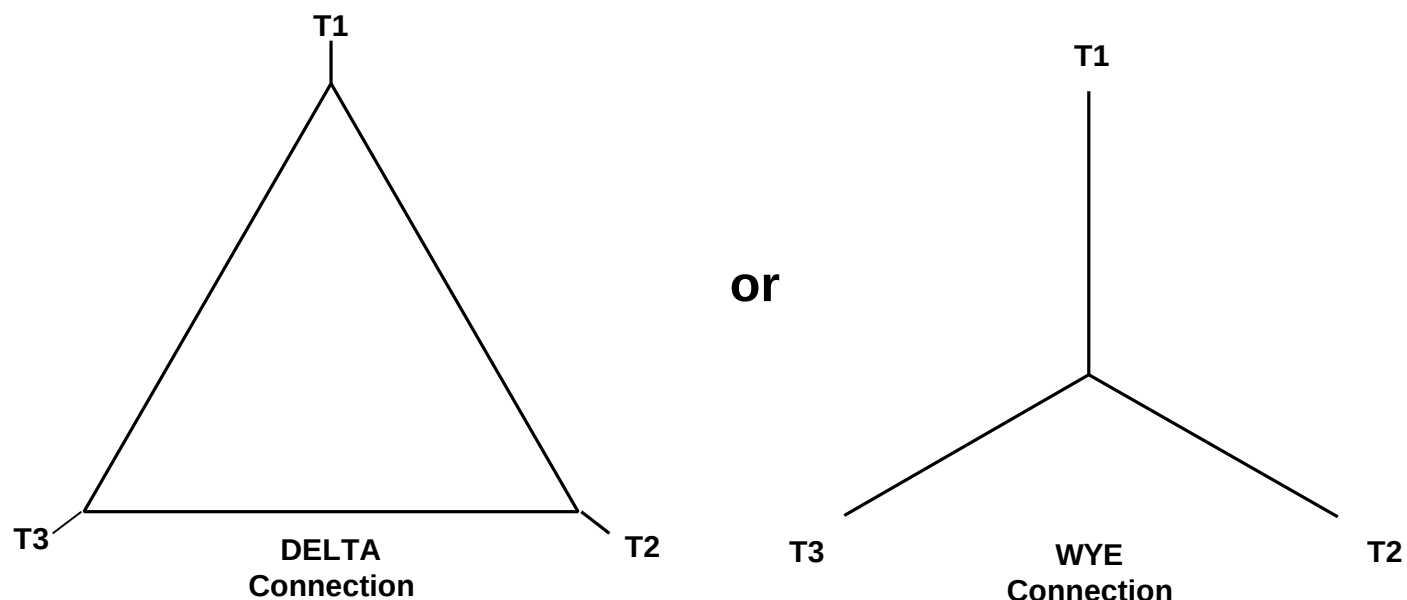


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## Motor Wiring Diagram



To reverse direction of rotation interchange connections L1 and L2.

Each lead may be comprised of one or more cables.  
Each cable will be marked with the appropriate lead number.