

|                                        |                              |        |            |
|----------------------------------------|------------------------------|--------|------------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>PERFORMANCE DATASHEET</b> | ISSUED | 01/15/2026 |
|                                        |                              | MODEL  | 75HP 6P    |

| NAMEPLATE INFORMATION |             |          |                                     |    |            |                |      |            |        |            |
|-----------------------|-------------|----------|-------------------------------------|----|------------|----------------|------|------------|--------|------------|
| OUTPUT                |             | RPM      | VOLTS                               | Hz | FRAME SIZE | ENCLOSURE TYPE | S.F. | INS. CALSS | RATING | AMB. TEMP. |
| HP                    | KW          |          |                                     |    |            |                |      |            |        |            |
| 75                    | 55          | 1190     | 230/460                             | 60 | 405TD      | TEFC           | 1.25 | F          | CONT.  | 40°C       |
| TEMP. RISE            | NEMA DESIGN | kVA CODE | Class/Division Hazardous Location   |    |            |                |      |            |        |            |
| B                     | B           | G        | Class I, Division 2, Group B, C & D |    |            |                |      |            |        |            |

| TYPICAL PERFORMANCE DATA |      |          |          |                  |          |          |
|--------------------------|------|----------|----------|------------------|----------|----------|
| EFFICIENCY (%)           |      |          |          | POWER FACTOR (%) |          |          |
| FULL LOAD                |      | 3/4 LOAD | 1/2 LOAD | FULL LOAD        | 3/4 LOAD | 1/2 LOAD |
| MIN.                     | NOM. |          |          |                  |          |          |
| 93.6                     | 94.5 | 94.7     | 94.2     | 81.9             | 78.6     | 70.3     |

| CURRENT        |               |               |              |                       |                        |
|----------------|---------------|---------------|--------------|-----------------------|------------------------|
| FULL LOAD AMPS | 3/4 LOAD AMPS | 1/2 LOAD AMPS | NO LOAD AMPS | STARTING CURRENT AMPS | STARTING CURRENT % FLC |
| 181.5/90.7     | 141.5/70.8    | 106.0/53.0    | 69.0/34.5    | 1161.6/580.5          | 640                    |

\* Usable at 75HP 50Hz 380V 109.2A 985R.P.M. S.F. 1.0 EFF. 93.7% (IE2)

| TORQUE            |                    |                  |               | ALLOWABLE STARTS PER HOUR |     |
|-------------------|--------------------|------------------|---------------|---------------------------|-----|
| FULL LOAD (lb-ft) | LOCKED ROTOR % FLT | BREAK DOWN % FLT | PULL UP % FLT | COLD                      | HOT |
| 331.2             | 140                | 200              | 105           | 2                         | 1   |

| MECHANICAL DATA                             |                                                 |                                                     |                                     |                  |              |
|---------------------------------------------|-------------------------------------------------|-----------------------------------------------------|-------------------------------------|------------------|--------------|
| INERTIA                                     |                                                 |                                                     | SOUND PRESSURE LEVEL @ 3 ft (dB(A)) | PROTECTION GRADE | WEIGHT (Lbs) |
| ROTOR WR <sup>2</sup> (lb-ft <sup>2</sup> ) | NEMA LOAD WK <sup>2</sup> (lb-ft <sup>2</sup> ) | MAX ALLOWABLE WK <sup>2</sup> (lb-ft <sup>2</sup> ) |                                     |                  |              |
| 44.909                                      | 904                                             | 982                                                 | 73                                  | 55               | 1238         |

| BEARING |        | GREASE                   | MOUNTING             |                     |
|---------|--------|--------------------------|----------------------|---------------------|
| DE      | ODE    |                          | TYPE OF CONSTRUCTION | TERMINAL BOX DESIGN |
| 6316C3  | 6313C3 | GREASE(MOBIL Polyrex EM) | RIGID MOUNTING       | NEMA                |

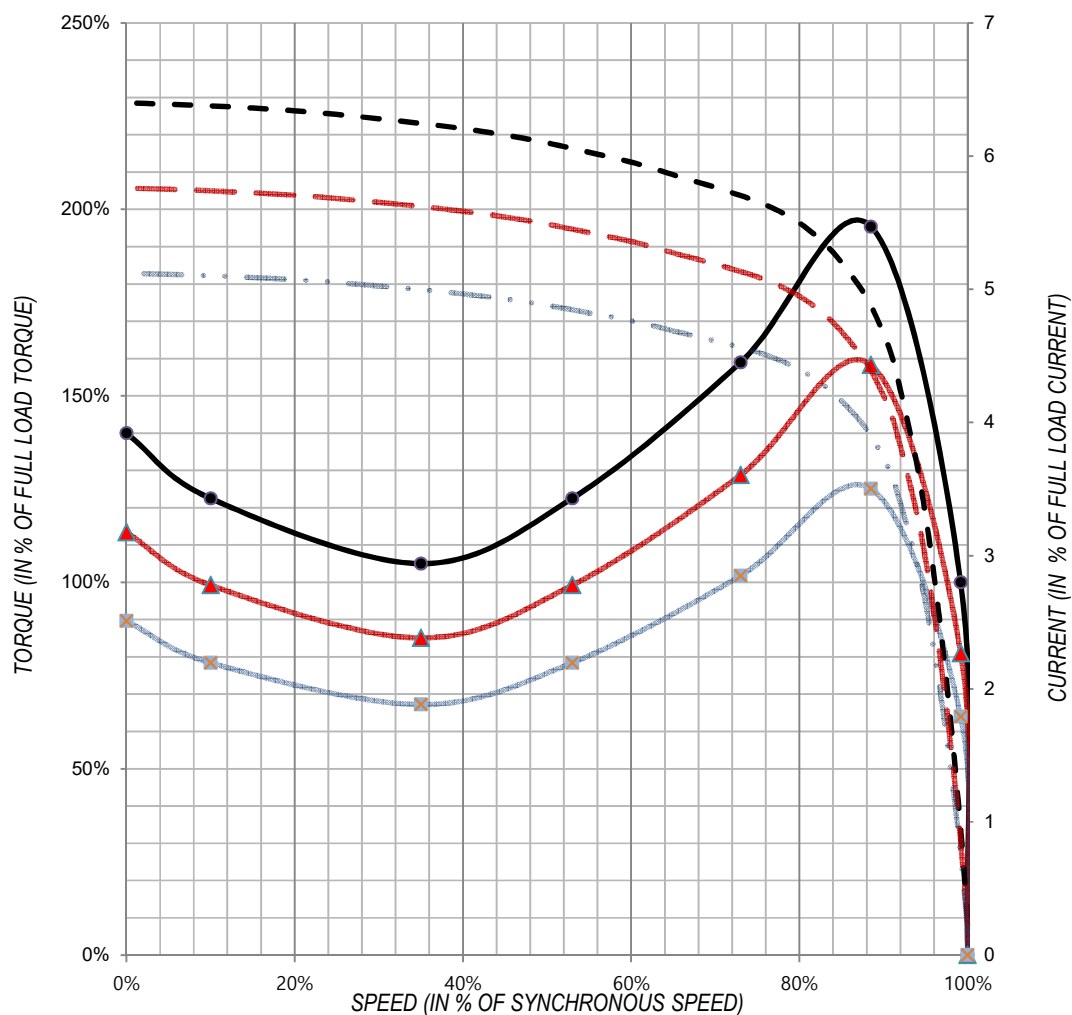
| INVERTER DUTY DATA |       |           |           |               |                                    |
|--------------------|-------|-----------|-----------|---------------|------------------------------------|
| TYPE               | HZ    | HP        | RPM       | TORQUE(LB-FT) | NOTE                               |
| VARIABLE TORQUE    | 3~60  | 0.0094~75 | 60~1200   | 0.828~331.2   | WITH TEMP. RISE CLASS F & S.F. 1.0 |
| CONSTANT TORQUE    | 6~60  | 7.5~75    | 120~1200  | 331.2         |                                    |
| CONSTANT HP        | 60~90 | 75        | 1200~1800 | 331.2~220.8   |                                    |

|             |             |          |     |
|-------------|-------------|----------|-----|
| DRAWING NO. | ES1AS185724 | REVISION | 0.1 |
|-------------|-------------|----------|-----|

ALL DATA ABOVE ARE SUBJECTED TO CHANGE WITHOUT NOTICE.

|                                        |                                           |  |  |  |           |
|----------------------------------------|-------------------------------------------|--|--|--|-----------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>SPEED - TORQUE &amp; CURRENT CURVE</b> |  |  |  | Curve No. |
|                                        |                                           |  |  |  | 1ST       |

|                           |         |                    |                          |            |                    |
|---------------------------|---------|--------------------|--------------------------|------------|--------------------|
| OUTPUT                    | 75      | HP                 | POLES                    | 6          | P                  |
| VOLTAGE                   | 230/460 | V                  | FREQUENCY                | 60         | Hz                 |
| FULL LOAD TORQUE          | 331.2   | lb-ft              | FULL LOAD CURRENT        | 181.5/90.7 | A                  |
| LOCKED ROTOR TORQUE       | 140     | %                  | LOCKED-ROTOR CURRENT     | 640        | %                  |
| BREAKDOWN TORQUE          | 200     | %                  | SPEED (at FULL LOAD)     | 1190       | RPM                |
| GD <sup>2</sup> of LOAD : | -       | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 44.909     | lb-ft <sup>2</sup> |

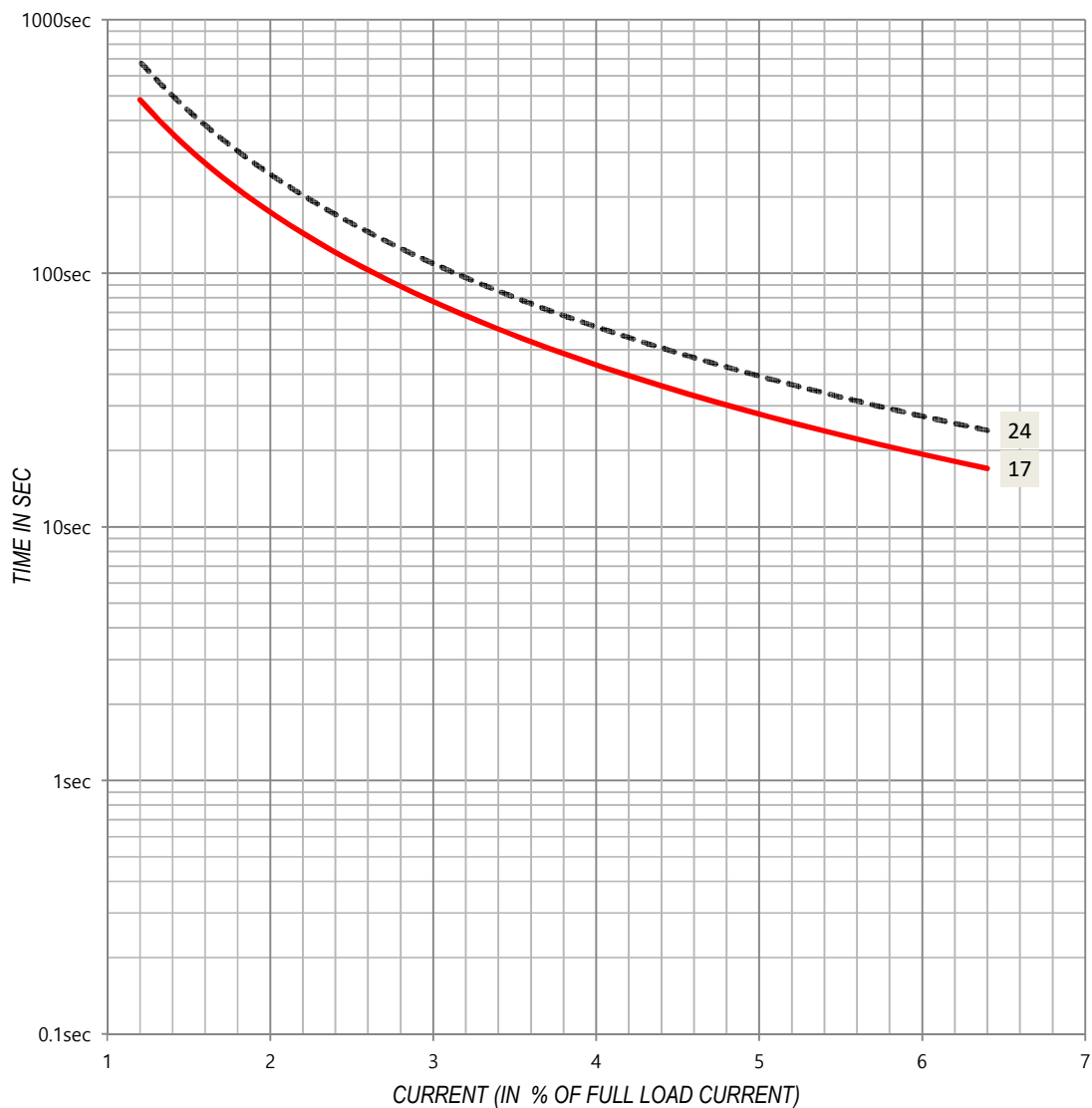


**NOTE**

- A : SPEED-TORQUE CURVE AT 100% RATED VOLTAGE
- ▲- B : SPEED-TORQUE CURVE AT 90% RATED VOLTAGE
- ...■... C : SPEED-TORQUE CURVE AT 80% RATED VOLTAGE
- - - D : SPEED-CURRENT CURVE AT 100% RATED VOLTAGE
- - - E : SPEED-CURRENT CURVE AT 90% RATED VOLTAGE
- ... F : SPEED-CURRENT CURVE AT 80% RATED VOLTAGE

|                                        |                                                     |  |  |  |           |
|----------------------------------------|-----------------------------------------------------|--|--|--|-----------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>THERMAL LIMIT &amp;<br/>TIME - CURRENT CURVE</b> |  |  |  | Curve No. |
|                                        |                                                     |  |  |  | 1TL       |

|                           |         |                    |                          |            |                    |
|---------------------------|---------|--------------------|--------------------------|------------|--------------------|
| OUTPUT                    | 75      | HP                 | POLES                    | 6          | P                  |
| VOLTAGE                   | 230/460 | V                  | FREQUENCY                | 60         | Hz                 |
| FULL LOAD TORQUE          | 331.2   | lb-ft              | FULL LOAD CURRENT        | 181.5/90.7 | A                  |
| LOCKED ROTOR TORQUE       | 140     | %                  | LOCKED-ROTOR CURRENT     | 640        | %                  |
| BREAKDOWN TORQUE          | 200     | %                  | SPEED (at FULL LOAD)     | 1190       | RPM                |
| GD <sup>2</sup> of LOAD : | -       | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 44.909     | lb-ft <sup>2</sup> |

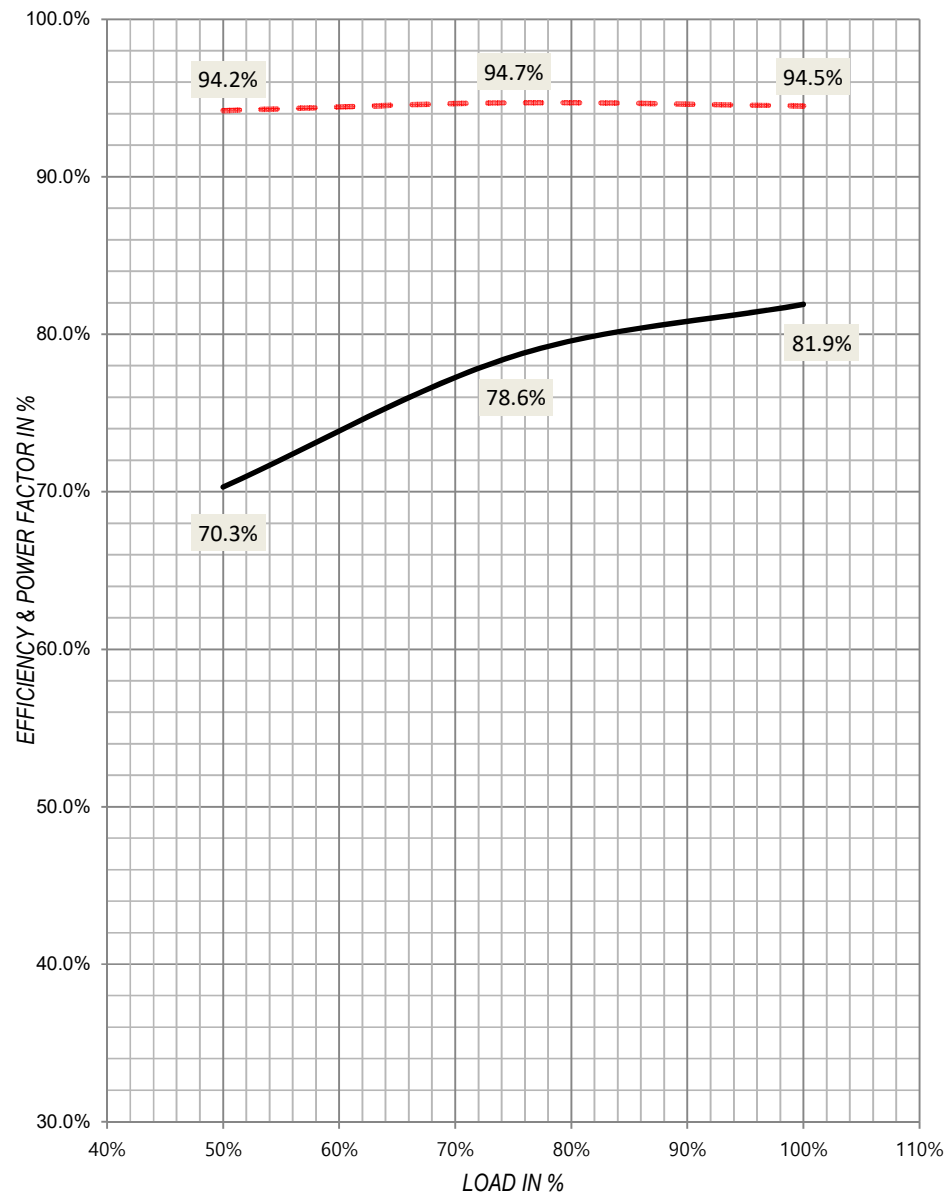


**NOTE**

- A : THERMAL LIMIT CURVE AT HOT CONDITION
- - - - - B : THERMAL LIMIT CURVE AT COLD CONDITION
- - - - - C : ※TIME-CURRENT CURVES(C,D,E) NEED BELOW DATA TO BE DRAWN
- - - - - D : \* LOAD GD2 AT MOTOR SHAFT
- - - - - E : \* SPEED-TORQUE CURVE OF LOAD

|                                        |                                                       |  |  |  |           |
|----------------------------------------|-------------------------------------------------------|--|--|--|-----------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>LOAD - POWER FACTOR<br/>&amp; EFFICIENCY CURVE</b> |  |  |  | Curve No. |
|                                        |                                                       |  |  |  | 1PE       |

|                           |         |                    |                          |            |                    |
|---------------------------|---------|--------------------|--------------------------|------------|--------------------|
| OUTPUT                    | 75      | HP                 | POLES                    | 6          | P                  |
| VOLTAGE                   | 230/460 | V                  | FREQUENCY                | 60         | Hz                 |
| FULL LOAD TORQUE          | 331.2   | lb-ft              | FULL LOAD CURRENT        | 181.5/90.7 | A                  |
| LOCKED ROTOR TORQUE       | 140     | %                  | LOCKED-ROTOR CURRENT     | 640        | %                  |
| BREAKDOWN TORQUE          | 200     | %                  | SPEED (at FULL LOAD)     | 1190       | RPM                |
| GD <sup>2</sup> of LOAD : | -       | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 44.909     | lb-ft <sup>2</sup> |



NOTE

- A : LOAD - POWER FACTOR CURVE
- - - B : LOAD - EFFICIENCY CURVE

# HICO

3 PHASE INDUCTION MOTOR

## CONNECTION DIAGRAM

ISSUED

12/01/2024

| DOUBLE VOLTAGE<br>DELTA CONNECTION |                 | DOUBLE VOLTAGE<br>STAR CONNECTION  |                 | SINGLE VOLTAGE<br>STAR-DELTA CONNECTION |                     | DOUBLE VOTAGE-STAR-DELTA CONNECTION |             |              |             |
|------------------------------------|-----------------|------------------------------------|-----------------|-----------------------------------------|---------------------|-------------------------------------|-------------|--------------|-------------|
| LOW<br>VOLTAGE                     | HIGH<br>VOLTAGE | LOW<br>VOLTAGE                     | HIGH<br>VOLTAGE | STAR<br>CONNECTION                      | DELTA<br>CONNECTION | LOW VOLTAGE                         |             | HIGH VOLTAGE |             |
|                                    |                 |                                    |                 |                                         |                     | STAR CONN.                          | DELTA CONN. | STAR CONN.   | DELTA CONN. |
|                                    |                 |                                    |                 |                                         |                     |                                     |             |              |             |
|                                    |                 |                                    |                 |                                         |                     |                                     |             |              |             |
| <b>DIRECT-ON-LINE<br/>STARTING</b> |                 | <b>DIRECT-ON-LINE<br/>STARTING</b> |                 | <b>WYE-DELTA<br/>STARTING</b>           |                     | <b>WYE-DELTA<br/>STARTING</b>       |             |              |             |

| SINGLE VOLTAGE PART-<br>WINDING CONNECTION |     | DOUBLE VOLTAGE<br>PART WINDING CONNECTION                                                 |     |                 | DOUBLE VOTAGE-STAR-DELTA AND<br>PART WINDING (ot LOW VOLTAGE) CONNECTION                             |                        |     |                        |     |
|--------------------------------------------|-----|-------------------------------------------------------------------------------------------|-----|-----------------|------------------------------------------------------------------------------------------------------|------------------------|-----|------------------------|-----|
| PART<br>WINDING<br>CONNECTION              | RUN | LOW VOLTAGE                                                                               |     | HIGH<br>VOLTAGE | LOW VOLTAGE                                                                                          |                        |     | HIGH VOLTAGE           |     |
|                                            |     | STARTING                                                                                  | RUN |                 | PART-WINDING<br>STARTING                                                                             | STAR-DELTA<br>STARTING | RUN | STAR-DELTA<br>STARTING | RUN |
|                                            |     |                                                                                           |     |                 |                                                                                                      |                        |     |                        |     |
|                                            |     |                                                                                           |     |                 |                                                                                                      |                        |     |                        |     |
| <b>PART-WINDING<br/>STARTING</b>           |     | <b>LOW VOLTAGE<br/>PART-WINDING STARTING<br/>HIGH VOLTAGE<br/>DIRECT-ON-LINE STARTING</b> |     |                 | <b>LOW VOLTAGE<br/>PART-WINDING/STAR-DELTA STARTING<br/>HIGH VOLTAGE<br/>DIRECT-ON-LINE STARTING</b> |                        |     |                        |     |

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