

|                                        |                              |  |  |  |        |            |
|----------------------------------------|------------------------------|--|--|--|--------|------------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>PERFORMANCE DATASHEET</b> |  |  |  | ISSUED | 01/15/2026 |
|                                        |                              |  |  |  | MODEL  | 50HP 2P    |

| NAMEPLATE INFORMATION |             |          |                                     |    |            |                |      |            |        |            |
|-----------------------|-------------|----------|-------------------------------------|----|------------|----------------|------|------------|--------|------------|
| OUTPUT                |             | RPM      | VOLTS                               | Hz | FRAME SIZE | ENCLOSURE TYPE | S.F. | INS. CALSS | RATING | AMB. TEMP. |
| HP                    | KW          |          |                                     |    |            |                |      |            |        |            |
| 50                    | 37          | 3555     | 230/460                             | 60 | 326TSD     | 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. |          |          |                  |          |          |
| 91.7                     | 93   | 93       | 92.1     | 87.3             | 85.5     | 79.8     |

| CURRENT        |               |               |              |                       |                        |
|----------------|---------------|---------------|--------------|-----------------------|------------------------|
| FULL LOAD AMPS | 3/4 LOAD AMPS | 1/2 LOAD AMPS | NO LOAD AMPS | STARTING CURRENT AMPS | STARTING CURRENT % FLC |
| 115.3/57.7     | 88.3/44.2     | 63.7/31.8     | 32.0/16.0    | 784/392.4             | 680                    |

\* Usable at 208V: 127.9 AMPS (FULL LOAD)

\* Usable at 50HP 50Hz 380V 70.5A 2935R.P.M. S.F. 1.0 EFF. 91.6% (IE1)

| TORQUE            |                    |                  |               | ALLOWABLE STARTS PER HOUR |     |
|-------------------|--------------------|------------------|---------------|---------------------------|-----|
| FULL LOAD (lb-ft) | LOCKED ROTOR % FLT | BREAK DOWN % FLT | PULL UP % FLT | COLD                      | HOT |
| 73.9              | 170                | 203              | 148           | 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> ) |                                     |                  |              |
| 4.859                                       | 49                                              | 95                                                  | 75                                  | 55               | 626          |

| BEARING |         | GREASE                   | MOUNTING             |                     |
|---------|---------|--------------------------|----------------------|---------------------|
| DE      | ODE     |                          | TYPE OF CONSTRUCTION | TERMINAL BOX DESIGN |
| 6212ZC3 | 6212ZC3 | GREASE(MOBIL Polyrex EM) | RIGID MOUNTING       | NEMA                |

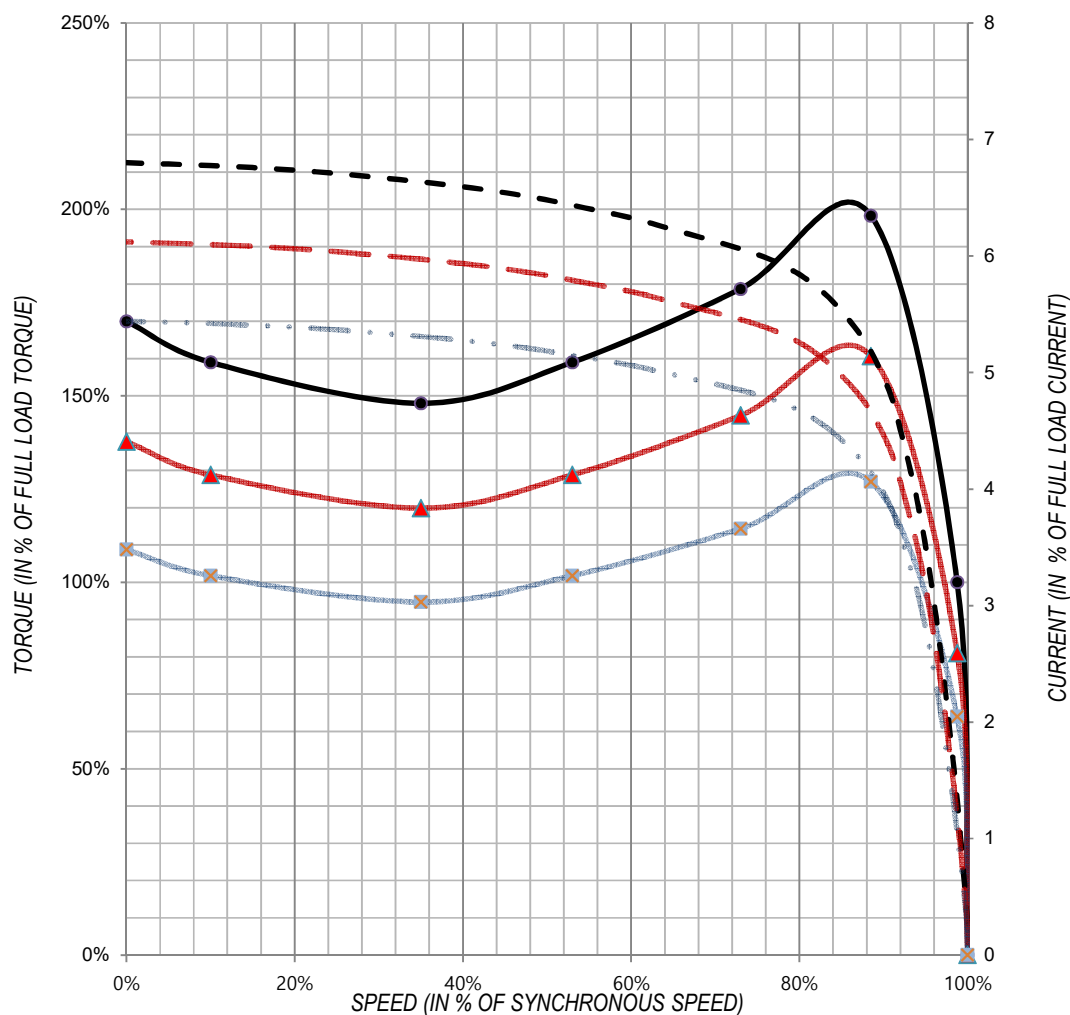
| INVERTER DUTY DATA |       |           |           |               |                                    |
|--------------------|-------|-----------|-----------|---------------|------------------------------------|
| TYPE               | HZ    | HP        | RPM       | TORQUE(LB-FT) | NOTE                               |
| VARIABLE TORQUE    | 3~60  | 0.0063~50 | 180~3600  | 0.185~73.9    | WITH TEMP. RISE CLASS F & S.F. 1.0 |
| CONSTANT TORQUE    | 6~60  | 5~50      | 360~3600  | 73.9          |                                    |
| CONSTANT HP        | 60~90 | 50        | 3600~5400 | 73.9~49.267   |                                    |

|                    |             |                 |     |
|--------------------|-------------|-----------------|-----|
| <b>DRAWING NO.</b> | ES1AS185715 | <b>REVISION</b> | 2.1 |
|--------------------|-------------|-----------------|-----|

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                    | 50      | HP                 | POLES                    | 2          | P                  |
| VOLTAGE                   | 230/460 | V                  | FREQUENCY                | 60         | Hz                 |
| FULL LOAD TORQUE          | 73.9    | lb-ft              | FULL LOAD CURRENT        | 115.3/57.7 | A                  |
| LOCKED ROTOR TORQUE       | 170     | %                  | LOCKED-ROTOR CURRENT     | 680        | %                  |
| BREAKDOWN TORQUE          | 203     | %                  | SPEED (at FULL LOAD)     | 3555       | RPM                |
| GD <sup>2</sup> of LOAD : | -       | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 4.859      | lb-ft <sup>2</sup> |

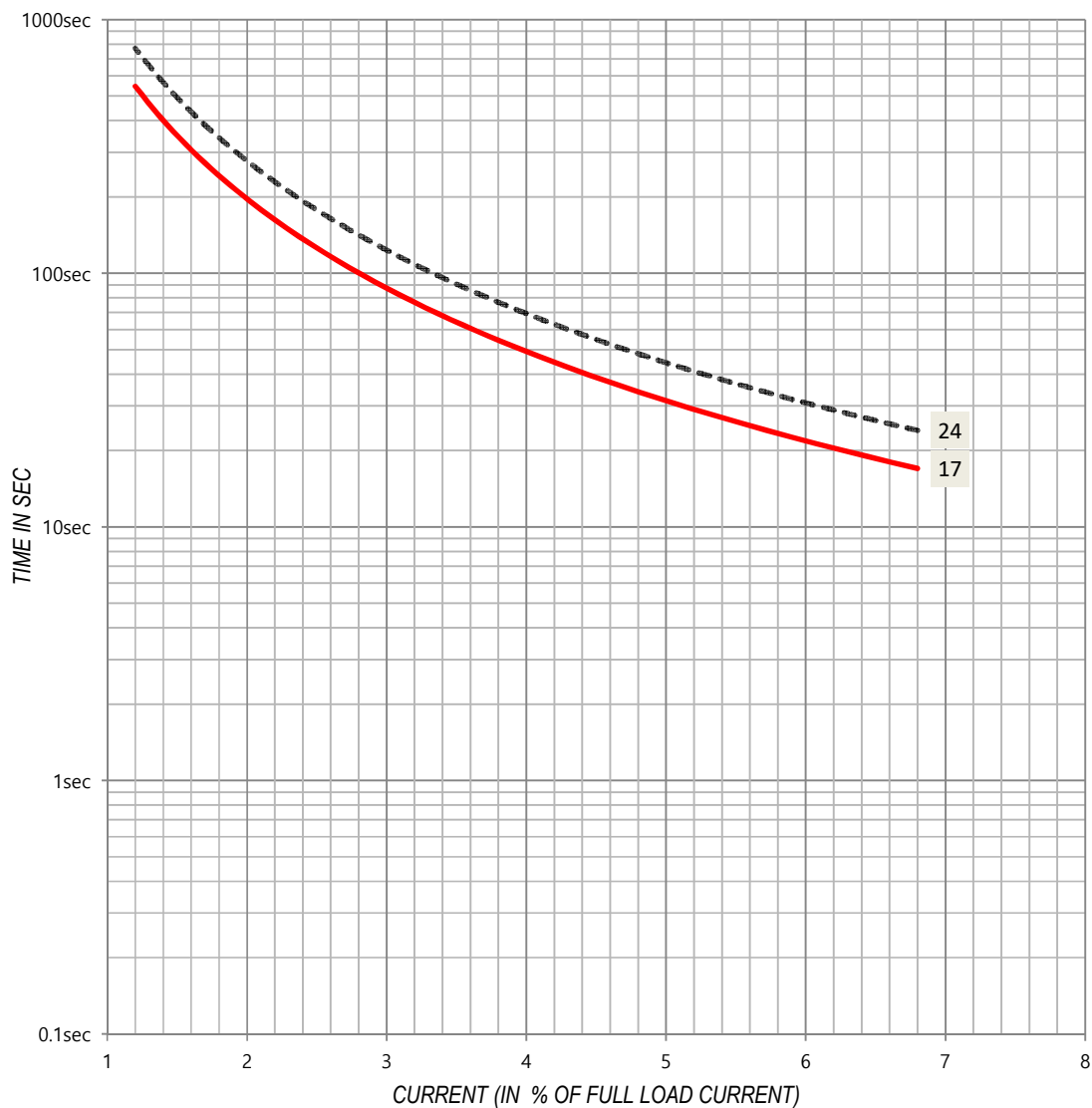


NOTE

|  |                            |                    |
|--|----------------------------|--------------------|
|  | 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  |

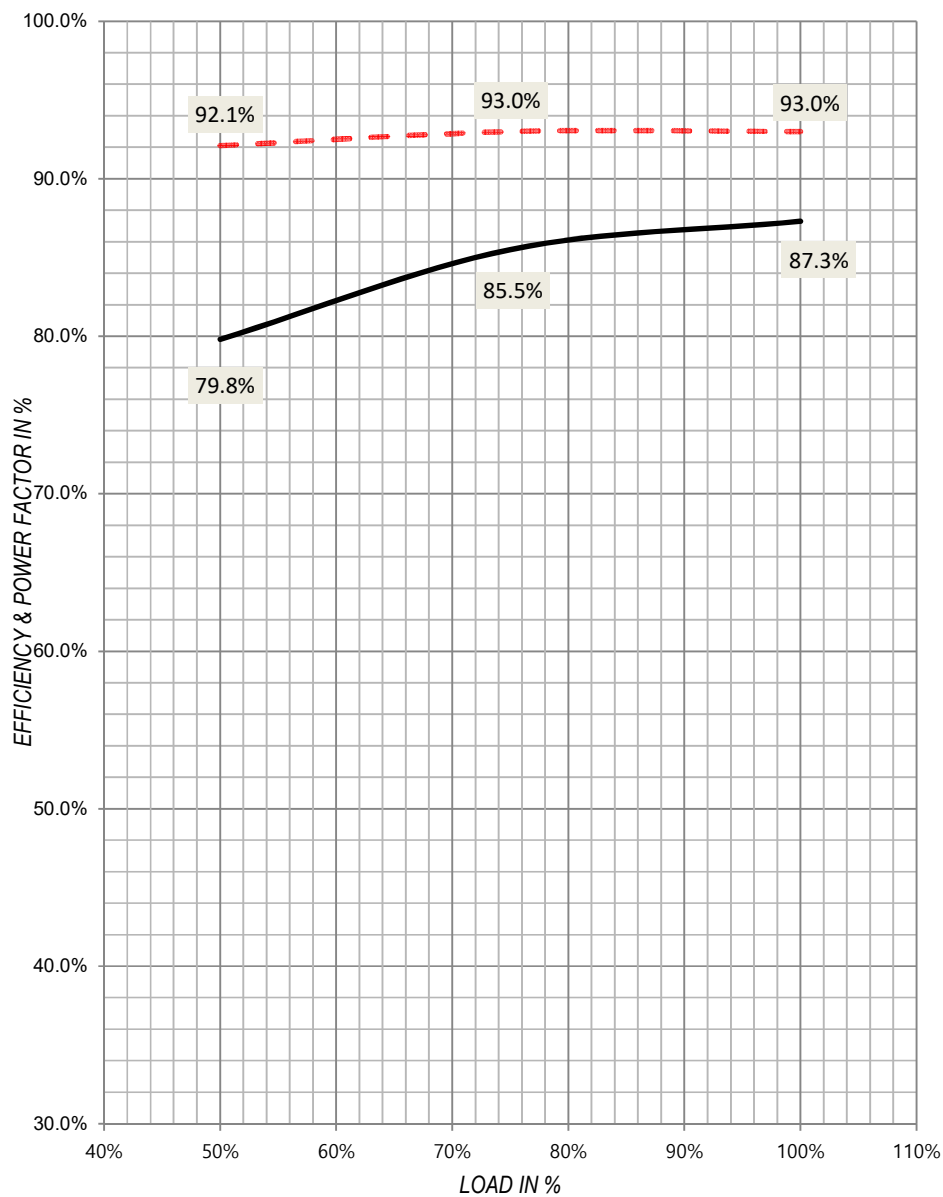
|                                        |                                                     |  |  |  |           |
|----------------------------------------|-----------------------------------------------------|--|--|--|-----------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>THERMAL LIMIT &amp;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

|                           |         |                    |                          |            |                    |
|---------------------------|---------|--------------------|--------------------------|------------|--------------------|
| OUTPUT                    | 50      | HP                 | POLES                    | 2          | P                  |
| VOLTAGE                   | 230/460 | V                  | FREQUENCY                | 60         | Hz                 |
| FULL LOAD TORQUE          | 73.9    | lb-ft              | FULL LOAD CURRENT        | 115.3/57.7 | A                  |
| LOCKED ROTOR TORQUE       | 170     | %                  | LOCKED-ROTOR CURRENT     | 680        | %                  |
| BREAKDOWN TORQUE          | 203     | %                  | SPEED (at FULL LOAD)     | 3555       | RPM                |
| GD <sup>2</sup> of LOAD : | -       | lb·ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 4.859      | lb·ft <sup>2</sup> |



|      |                                              |                                                             |
|------|----------------------------------------------|-------------------------------------------------------------|
| NOTE | <span style="color: red;">—————</span>       | A : THERMAL LIMIT CURVE AT HOT CONDITION                    |
|      | <span style="color: black;">- - - - -</span> | B : THERMAL LIMIT CURVE AT COLD CONDITION                   |
|      | <span style="color: black;">- - - - -</span> | C : ※TIME-CURRENT CURVES(C,D,E) NEED BELOW DATA TO BE DRAWN |
|      | <span style="color: red;">- - - - -</span>   | D : * LOAD GD2 AT MOTOR SHAFT                               |
|      | <span style="color: blue;">- - - - -</span>  | E : * SPEED-TORQUE CURVE OF LOAD                            |

|                                                    |                                           |                    |                          |            |                    |
|----------------------------------------------------|-------------------------------------------|--------------------|--------------------------|------------|--------------------|
| <div>HICO</div> <div>3 PHASE INDUCTION MOTOR</div> | LOAD - POWER FACTOR<br>& EFFICIENCY CURVE |                    |                          |            | Curve No.          |
|                                                    |                                           |                    |                          |            | 1PE                |
| OUTPUT                                             | 50                                        | HP                 | POLES                    | 2          | P                  |
| VOLTAGE                                            | 230/460                                   | V                  | FREQUENCY                | 60         | Hz                 |
| FULL LOAD TORQUE                                   | 73.9                                      | lb-ft              | FULL LOAD CURRENT        | 115.3/57.7 | A                  |
| LOCKED ROTOR TORQUE                                | 170                                       | %                  | LOCKED-ROTOR CURRENT     | 680        | %                  |
| BREAKDOWN TORQUE                                   | 203                                       | %                  | SPEED (at FULL LOAD)     | 3555       | RPM                |
| GD <sup>2</sup> of LOAD :                          | -                                         | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 4.859      | 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>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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