

|                                        |                              |        |            |
|----------------------------------------|------------------------------|--------|------------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>PERFORMANCE DATASHEET</b> | ISSUED | 01/15/2026 |
|                                        |                              | MODEL  | 75HP 4P    |

| NAMEPLATE INFORMATION |             |          |                                     |    |            |                |      |            |        |            |
|-----------------------|-------------|----------|-------------------------------------|----|------------|----------------|------|------------|--------|------------|
| OUTPUT                |             | RPM      | VOLTS                               | Hz | FRAME SIZE | ENCLOSURE TYPE | S.F. | INS. CALSS | RATING | AMB. TEMP. |
| HP                    | KW          |          |                                     |    |            |                |      |            |        |            |
| 75                    | 55          | 1785     | 575                                 | 60 | 365T       | 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. |          |          |                  |          |          |
| 94.5                     | 95.4 | 95.8     | 95.7     | 85.4             | 82.1     | 73.9     |

| CURRENT        |               |               |              |                       |                        |
|----------------|---------------|---------------|--------------|-----------------------|------------------------|
| FULL LOAD AMPS | 3/4 LOAD AMPS | 1/2 LOAD AMPS | NO LOAD AMPS | STARTING CURRENT AMPS | STARTING CURRENT % FLC |
| 69.0           | 53.6          | 39.7          | 28.0         | 448.5                 | 650                    |

| TORQUE            |                    |                  |               | ALLOWABLE STARTS PER HOUR |     |
|-------------------|--------------------|------------------|---------------|---------------------------|-----|
| FULL LOAD (lb-ft) | LOCKED ROTOR % FLT | BREAK DOWN % FLT | PULL UP % FLT | COLD                      | HOT |
| 220.8             | 170                | 268              | 127           | 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> ) |                                     |                  |              |
| 18.747                                      | 338                                             | 742                                                 | 72                                  | 55               | 863          |

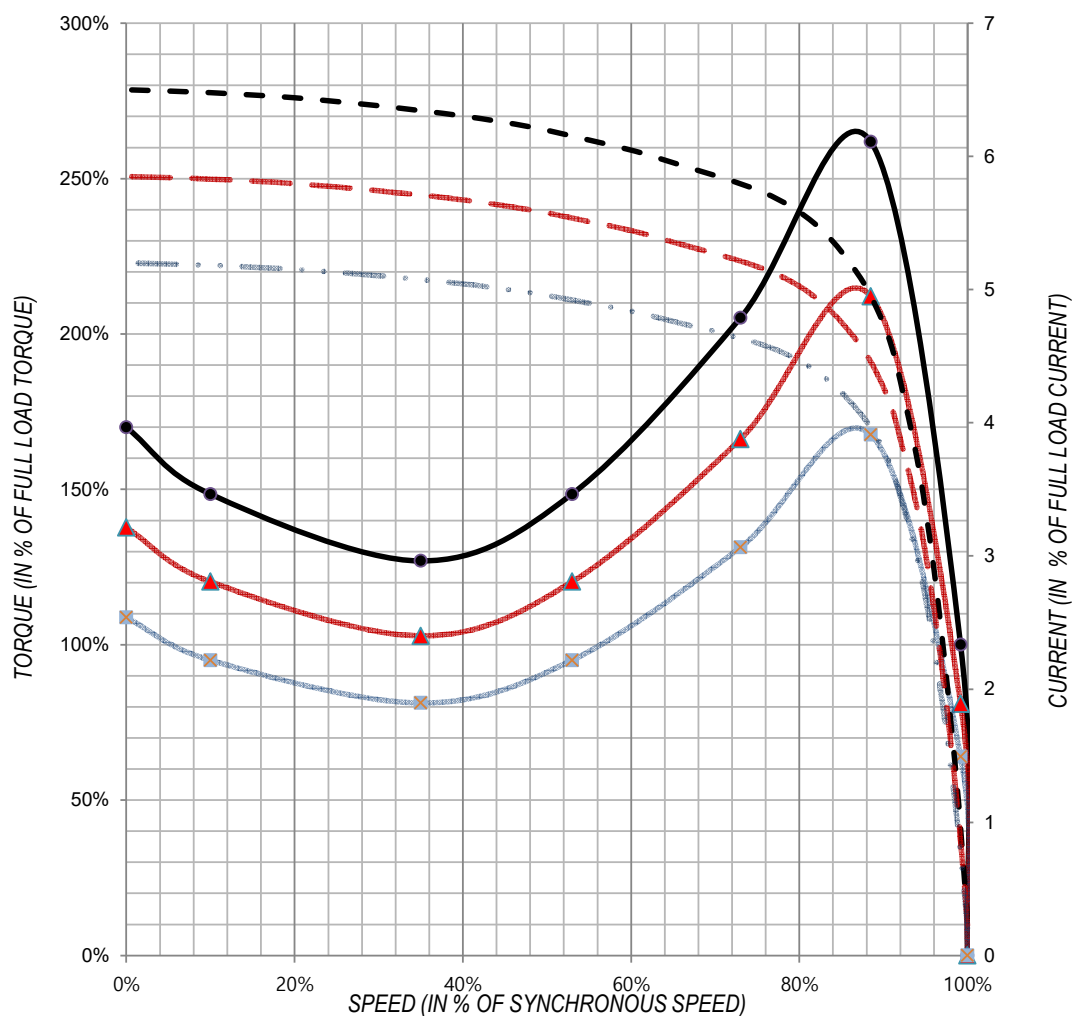
| BEARING |        | GREASE                   | MOUNTING             |                     |
|---------|--------|--------------------------|----------------------|---------------------|
| DE      | ODE    |                          | TYPE OF CONSTRUCTION | TERMINAL BOX DESIGN |
| 6314C3  | 6312C3 | GREASE(MOBIL Polyrex EM) | RIGID MOUNTING       | NEMA                |

| INVERTER DUTY DATA |       |           |           |               |                                    |
|--------------------|-------|-----------|-----------|---------------|------------------------------------|
| TYPE               | HZ    | HP        | RPM       | TORQUE(LB-FT) | NOTE                               |
| VARIABLE TORQUE    | 3~60  | 0.0094~75 | 90~1800   | 0.552~220.8   | WITH TEMP. RISE CLASS F & S.F. 1.0 |
| CONSTANT TORQUE    | 6~60  | 7.5~75    | 180~1800  | 220.8         |                                    |
| CONSTANT HP        | 60~90 | 75        | 1800~2700 | 220.8~147.2   |                                    |

| DRAWING NO. | ES1AS180420 | REVISION | 0.1 |
|-------------|-------------|----------|-----|
|-------------|-------------|----------|-----|

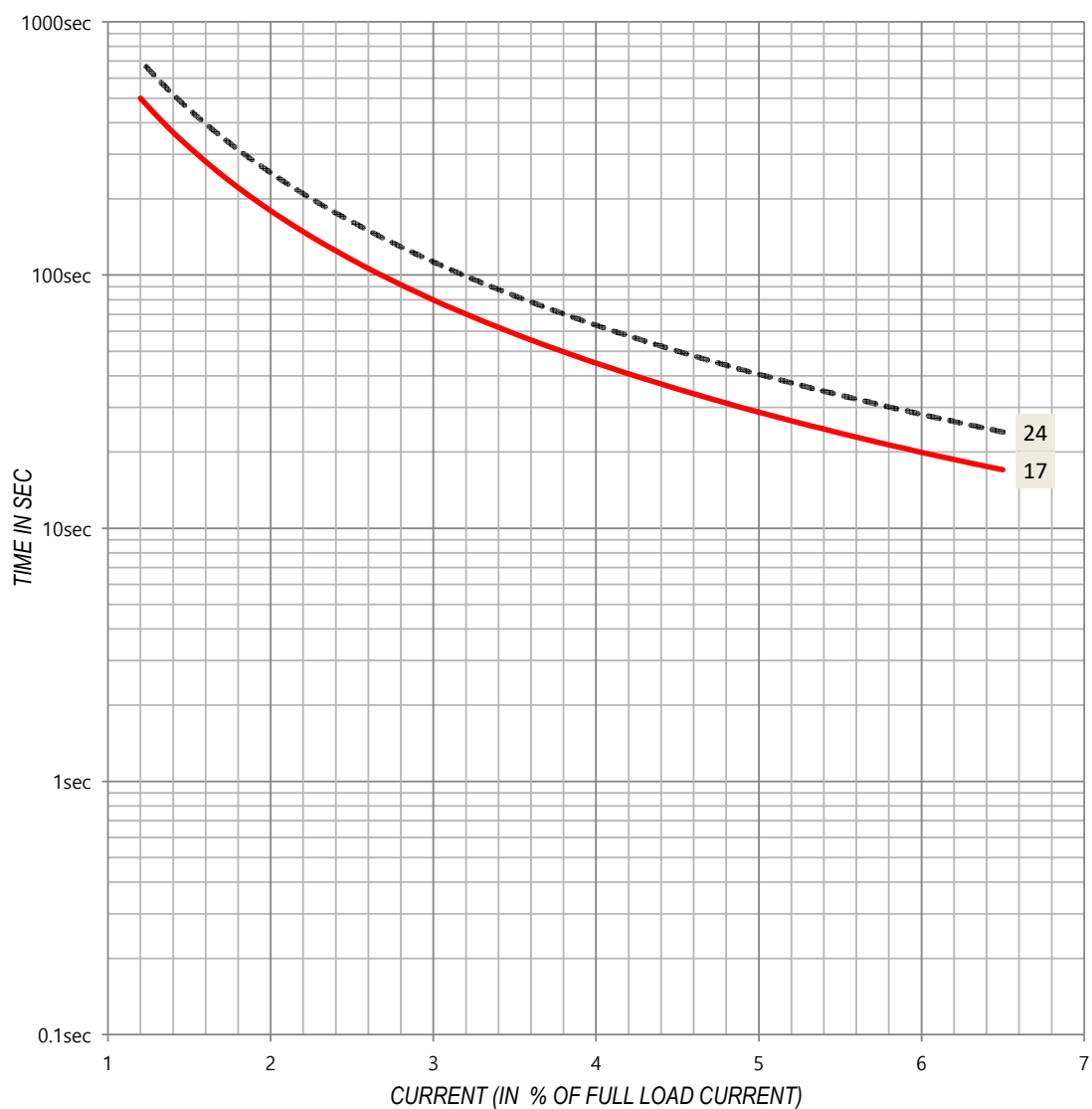
ALL DATA ABOVE ARE SUBJECTED TO CHANGE WITHOUT NOTICE.

| <div> <div>HICO</div> <div>3 PHASE INDUCTION MOTOR</div> </div> | SPEED - TORQUE & CURRENT CURVE |                    |                          | Curve No. |                    |
|-----------------------------------------------------------------|--------------------------------|--------------------|--------------------------|-----------|--------------------|
|                                                                 |                                |                    |                          | 1ST       |                    |
| OUTPUT                                                          | 75                             | HP                 | POLES                    | 4         | P                  |
| VOLTAGE                                                         | 575                            | V                  | FREQUENCY                | 60        | Hz                 |
| FULL LOAD TORQUE                                                | 220.8                          | lb-ft              | FULL LOAD CURRENT        | 69.0      | A                  |
| LOCKED ROTOR TORQUE                                             | 170                            | %                  | LOCKED-ROTOR CURRENT     | 650       | %                  |
| BREAKDOWN TORQUE                                                | 268                            | %                  | SPEED (at FULL LOAD)     | 1785      | RPM                |
| GD <sup>2</sup> of LOAD :                                       | -                              | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 18.747    | 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  |

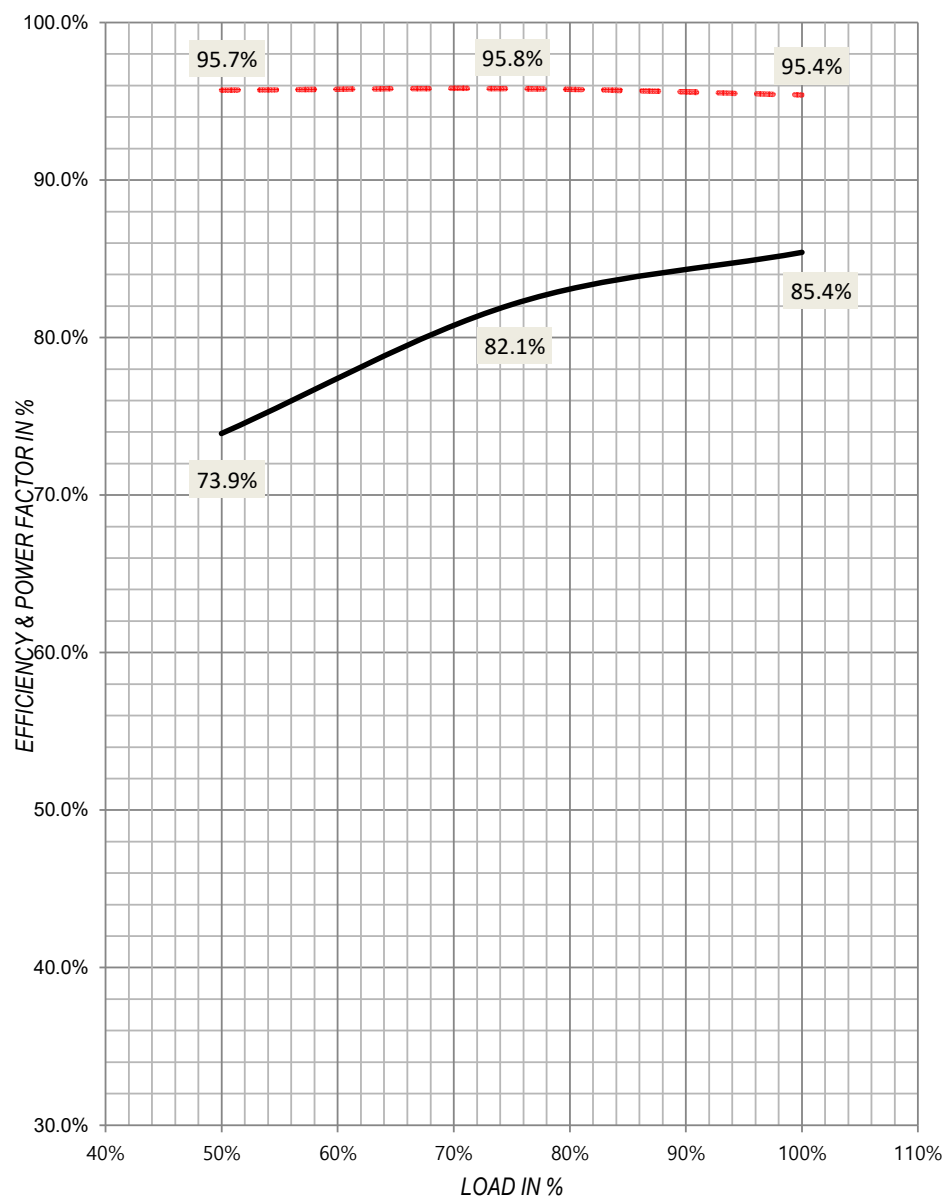
| HICO<br>3 PHASE INDUCTION MOTOR | THERMAL LIMIT &<br>TIME - CURRENT CURVE |                    |                          | Curve No. |                    |
|---------------------------------|-----------------------------------------|--------------------|--------------------------|-----------|--------------------|
|                                 |                                         |                    |                          | 1TL       |                    |
| OUTPUT                          | 75                                      | HP                 | POLES                    | 4         | P                  |
| VOLTAGE                         | 575                                     | V                  | FREQUENCY                | 60        | Hz                 |
| FULL LOAD TORQUE                | 220.8                                   | lb-ft              | FULL LOAD CURRENT        | 69.0      | A                  |
| LOCKED ROTOR TORQUE             | 170                                     | %                  | LOCKED-ROTOR CURRENT     | 650       | %                  |
| BREAKDOWN TORQUE                | 268                                     | %                  | SPEED (at FULL LOAD)     | 1785      | RPM                |
| GD <sup>2</sup> of LOAD :       | -                                       | lb·ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 18.747    | 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 GD<sup>2</sup> 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                    | 4      | P                  |
| VOLTAGE                                | 575                                                   | V                  | FREQUENCY                | 60     | Hz                 |
| FULL LOAD TORQUE                       | 220.8                                                 | lb-ft              | FULL LOAD CURRENT        | 69.0   | A                  |
| LOCKED ROTOR TORQUE                    | 170                                                   | %                  | LOCKED-ROTOR CURRENT     | 650    | %                  |
| BREAKDOWN TORQUE                       | 268                                                   | %                  | SPEED (at FULL LOAD)     | 1785   | RPM                |
| GD <sup>2</sup> of LOAD :              | -                                                     | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 18.747 | 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 VOLTAGE-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> |             |

| SINGLE VOLTAGE PART-<br>WINDING CONNECTION |     | DOUBLE VOLTAGE<br>PART WINDING CONNECTION                                                 |     |                 | DOUBLE VOLTAGE-STAR-DELTA AND<br>PART WINDING (at 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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