

HICO 3 PHASE INDUCTION MOTOR	PERFORMANCE DATASHEET	ISSUED	01/15/2026
		MODEL	50HP 6P

NAMEPLATE INFORMATION										
OUTPUT		RPM	VOLTS	Hz	FRAME SIZE	ENCLOSURE TYPE	S.F.	INS. CALSS	RATING	AMB. TEMP.
HP	KW									
50	37	1185	230/460	60	365TC	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.					
93.0	94.1	94.5	94.3	84.1	82.2	75.8

CURRENT					
FULL LOAD AMPS	3/4 LOAD AMPS	1/2 LOAD AMPS	NO LOAD AMPS	STARTING CURRENT AMPS	STARTING CURRENT % FLC
118.3/59.2	90.4/45.2	65.5/32.7	36.6/18.3	769/384.8	650

* Usable at 208V: 131 AMPS (FULL LOAD)

* Usable at 50HP 50Hz 380V 72.7A 980R.P.M. S.F. 1.0 EFF. 92.2% (IE2)

TORQUE				ALLOWABLE STARTS PER HOUR	
FULL LOAD (lb-ft)	LOCKED ROTOR % FLT	BREAK DOWN % FLT	PULL UP % FLT	COLD	HOT
221.8	150	200	119	2	1

MECHANICAL DATA					
INERTIA			SOUND PRESSURE LEVEL @ 3 ft (dB(A))	PROTECTION GRADE	WEIGHT (Lbs)
ROTOR WR ² (lb-ft ²)	NEMA LOAD WK ² (lb-ft ²)	MAX ALLOWABLE WK ² (lb-ft ²)			
25.558	620	816	71	55	809

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

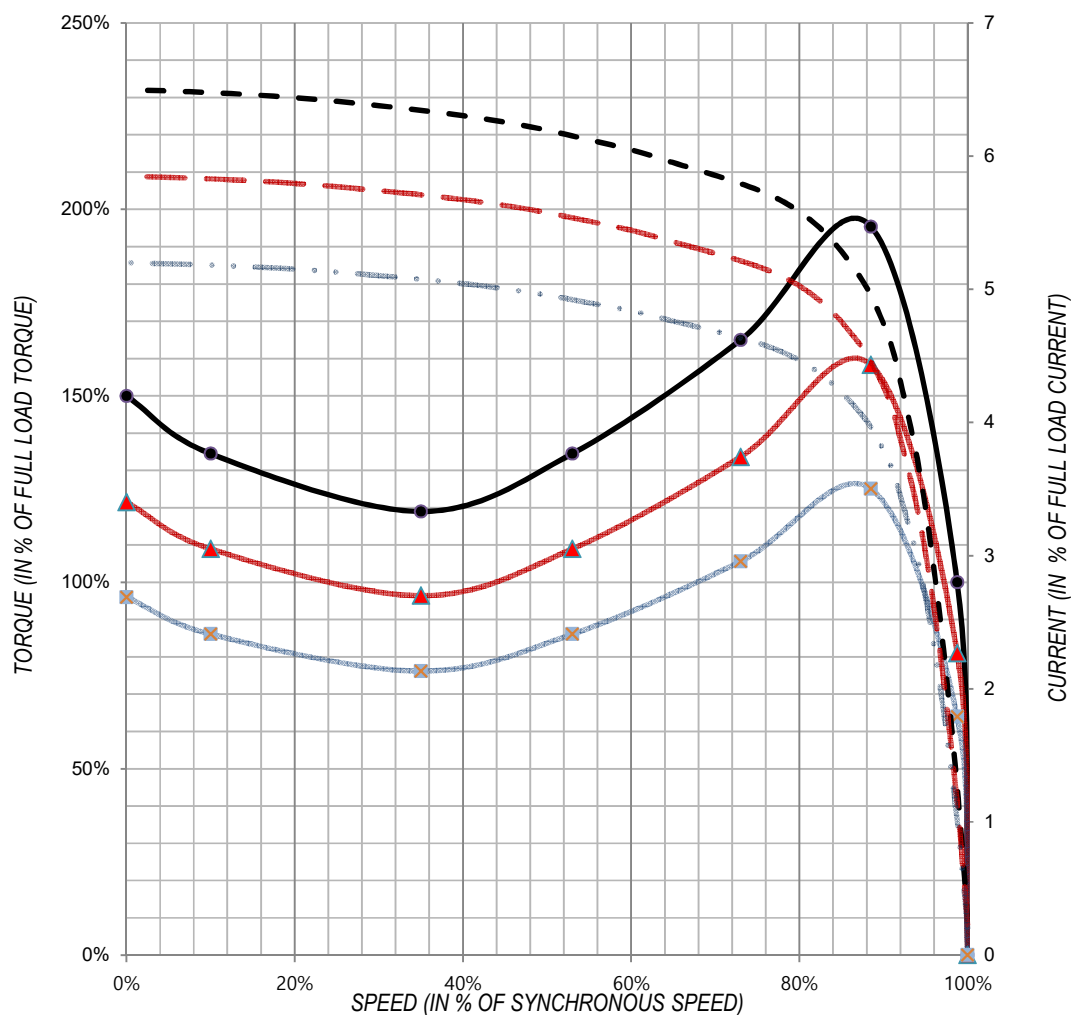
INVERTER DUTY DATA					
TYPE	HZ	HP	RPM	TORQUE(LB-FT)	NOTE
VARIABLE TORQUE	3~60	0.0063~50	60~1200	0.555~221.8	WITH TEMP. RISE CLASS F & S.F. 1.0
CONSTANT TORQUE	6~60	5~50	120~1200	221.8	
CONSTANT HP	60~90	50	1200~1800	221.8~147.867	

DRAWING NO.	ES1AS180520	REVISION	2.1
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ALL DATA ABOVE ARE SUBJECTED TO CHANGE WITHOUT NOTICE.

HICO 3 PHASE INDUCTION MOTOR	SPEED - TORQUE & CURRENT CURVE				Curve No.
					1ST

OUTPUT	50	HP	POLES	6	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	221.8	lb-ft	FULL LOAD CURRENT	118.3/59.2	A
LOCKED ROTOR TORQUE	150	%	LOCKED-ROTOR CURRENT	650	%
BREAKDOWN TORQUE	200	%	SPEED (at FULL LOAD)	1185	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	25.558	lb-ft ²

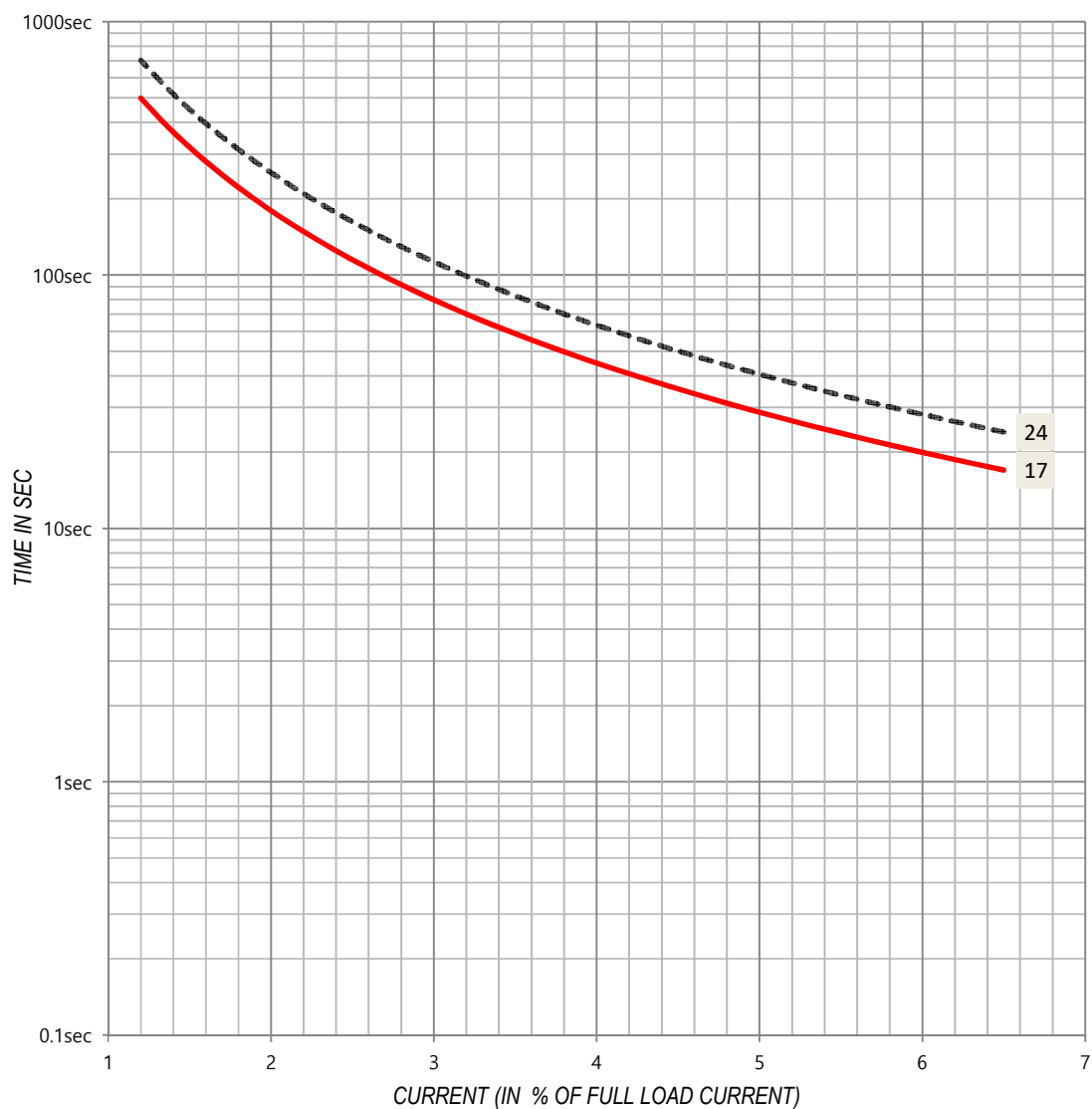


NOTE

	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 3 PHASE INDUCTION MOTOR	THERMAL LIMIT & TIME - CURRENT CURVE				Curve No.
					1TL

OUTPUT	50	HP	POLES	6	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	221.8	lb-ft	FULL LOAD CURRENT	118.3/59.2	A
LOCKED ROTOR TORQUE	150	%	LOCKED-ROTOR CURRENT	650	%
BREAKDOWN TORQUE	200	%	SPEED (at FULL LOAD)	1185	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	25.558	lb-ft ²

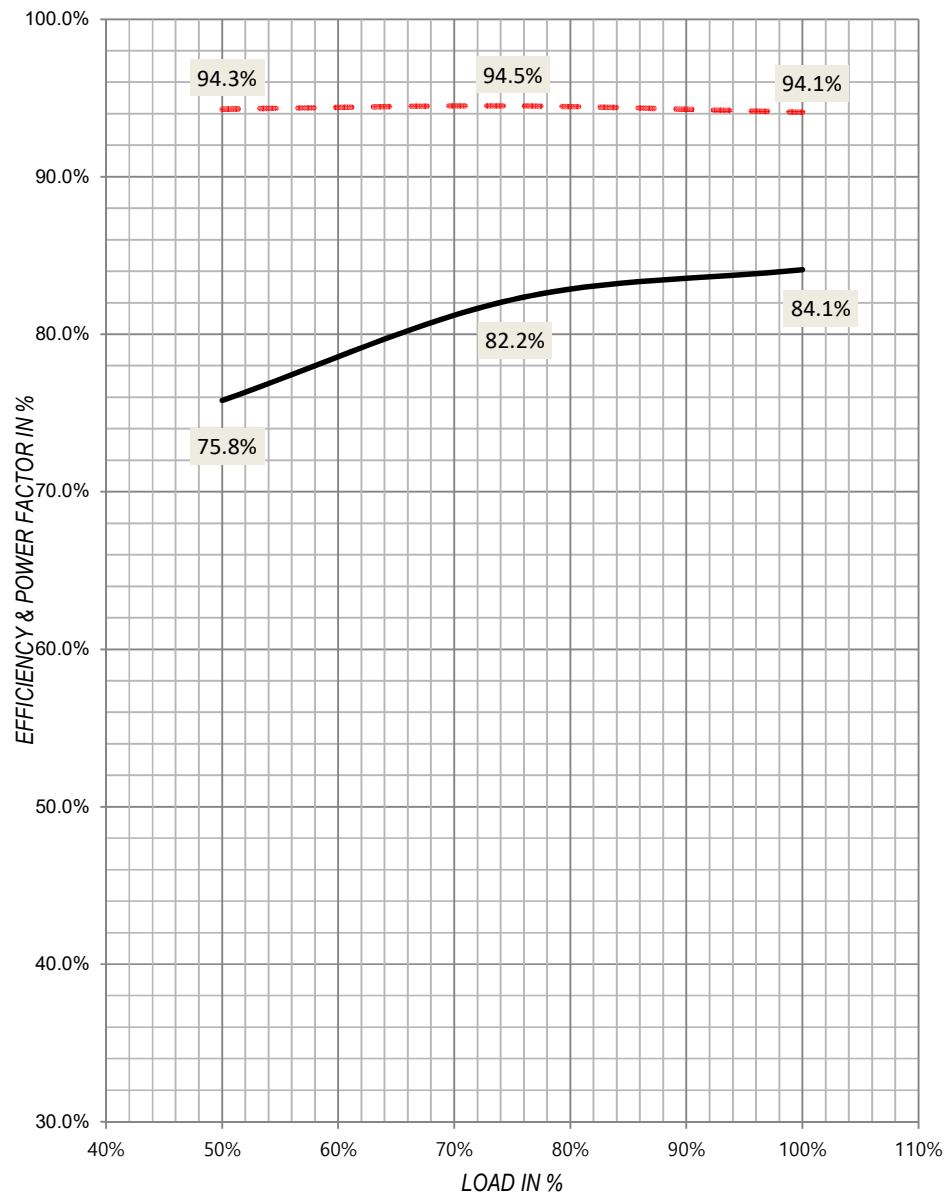


NOTE

- 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

HICO 3 PHASE INDUCTION MOTOR	LOAD - POWER FACTOR & EFFICIENCY CURVE				Curve No.
					1PE

OUTPUT	50	HP	POLES	6	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	221.8	lb-ft	FULL LOAD CURRENT	118.3/59.2	A
LOCKED ROTOR TORQUE	150	%	LOCKED-ROTOR CURRENT	650	%
BREAKDOWN TORQUE	200	%	SPEED (at FULL LOAD)	1185	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	25.558	lb-ft ²



NOTE

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

HICO

3 PHASE INDUCTION MOTOR

CONNECTION DIAGRAM

ISSUED

12/01/2024

DOUBLE VOLTAGE DELTA CONNECTION		DOUBLE VOLTAGE STAR CONNECTION		SINGLE VOLTAGE STAR-DELTA CONNECTION		DOUBLE VOTAGE - STAR-DELTA CONNECTION			
LOW VOLTAGE	HIGH VOLTAGE	LOW VOLTAGE	HIGH VOLTAGE	STAR CONNECTION	DELTA CONNECTION	LOW VOLTAGE		HIGH VOLTAGE	
						STAR CONN.	DELTA CONN.	STAR CONN.	DELTA CONN.
DIRECT-ON-LINE STARTING		DIRECT-ON-LINE STARTING		WYE-DELTA STARTING		WYE-DELTA STARTING			

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

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