

HICO 3 PHASE INDUCTION MOTOR	PERFORMANCE DATASHEET	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	326TS	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 ² (lb-ft ²)	NEMA LOAD WK ² (lb-ft ²)	MAX ALLOWABLE WK ² (lb-ft ²)			
4.859	49	95	75	55	587

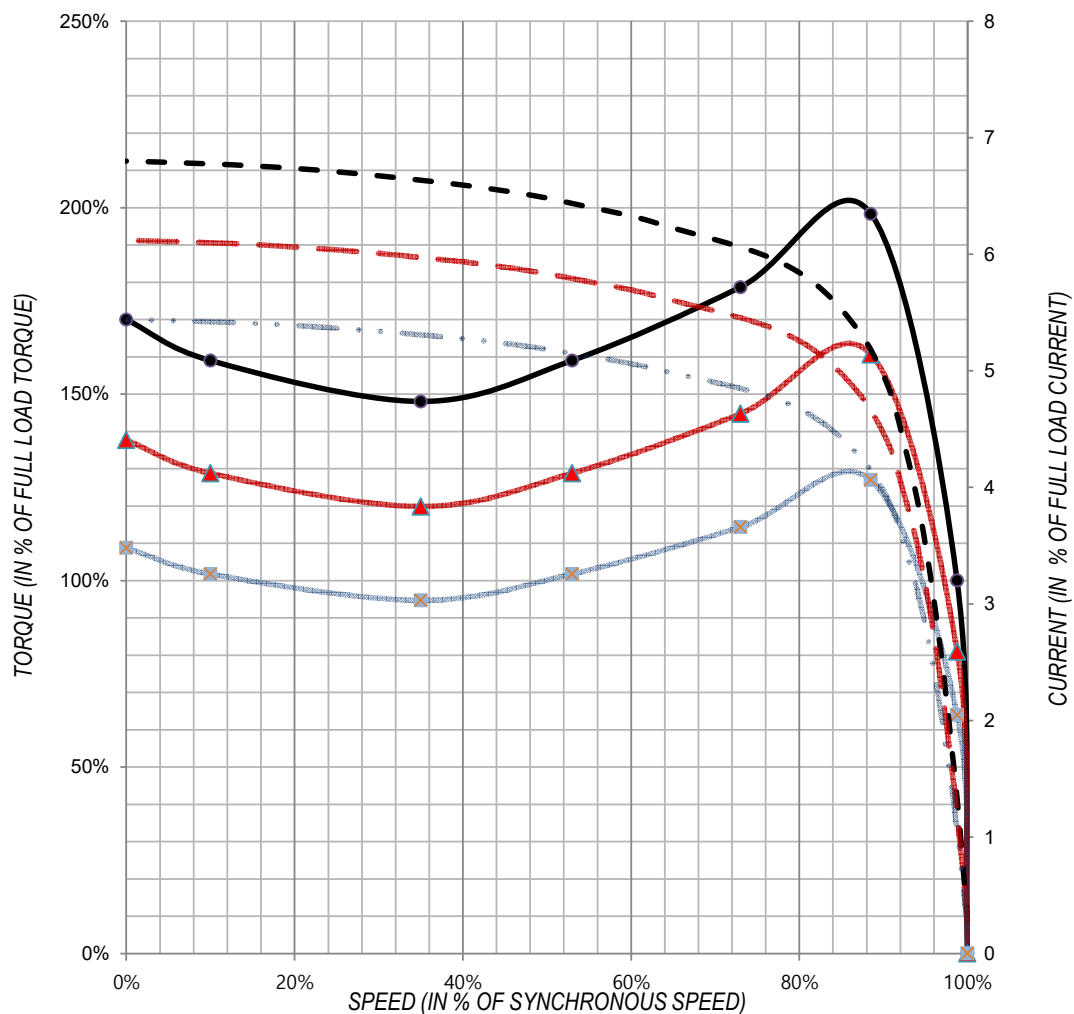
BEARING		GREASE	MOUNTING	
DE	ODE		TYPE OF CONSTRUCTION	TERMINAL BOX DESIGN
6212ZC3	6212ZC3	GREASE(MOBIL Polyrex EM)	RIGID MOUNTING	NEMA

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	

DRAWING NO.	ES1AS180415	REVISION	2.1
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ALL DATA ABOVE ARE SUBJECTED TO CHANGE WITHOUT NOTICE.

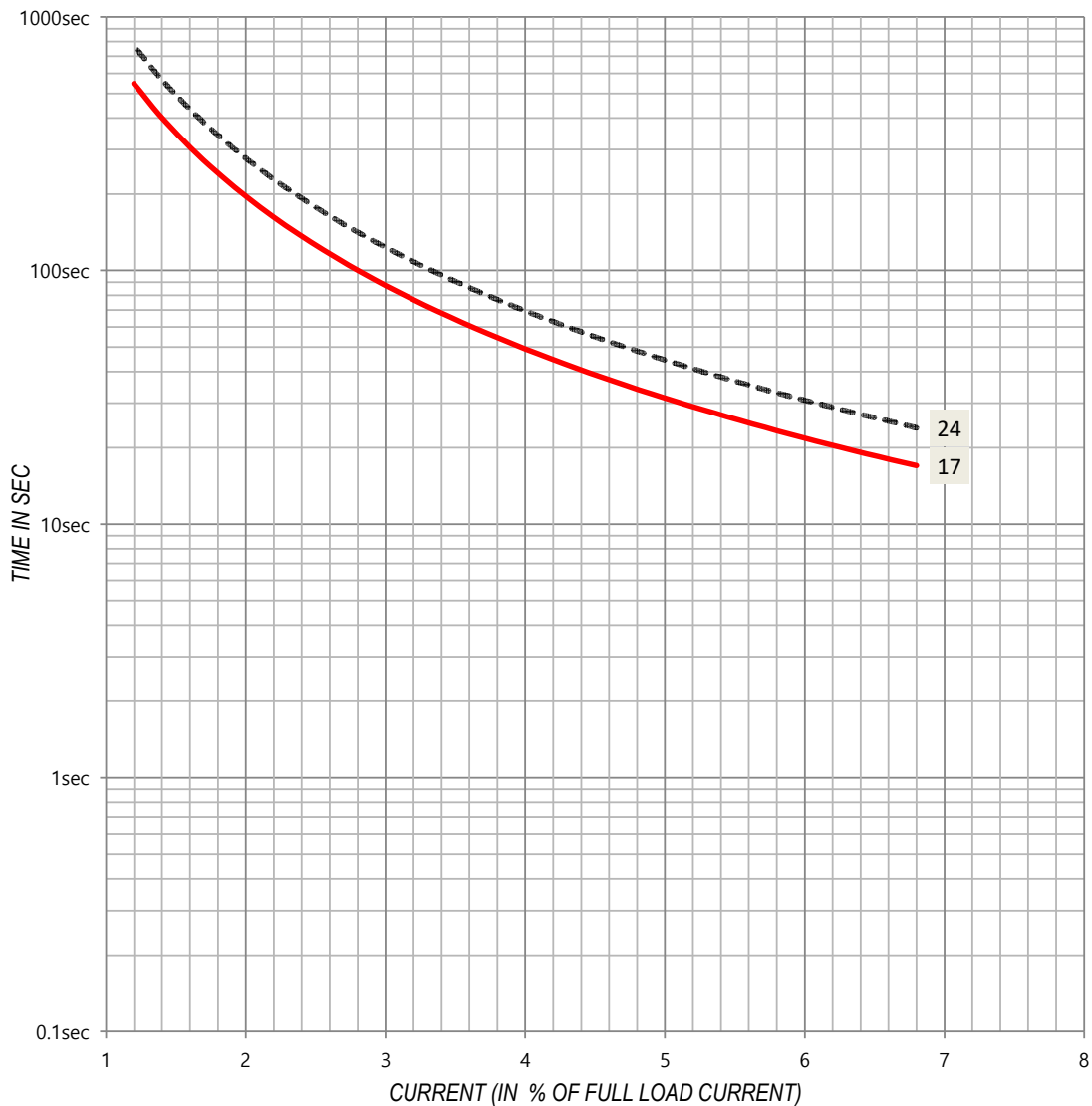
HICO 3 PHASE INDUCTION MOTOR	SPEED - TORQUE & CURRENT CURVE			Curve No.	
				1ST	
OUTPUT	50	HP	POLES	2	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	73.9	lb-ft	FULL LOAD CURRENT	115.3/57.7	A
LOCKED ROTOR TORQUE	170	%	LOCKED-ROTOR CURRENT	680	%
BREAKDOWN TORQUE	203	%	SPEED (at FULL LOAD)	3555	RPM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



NOTE

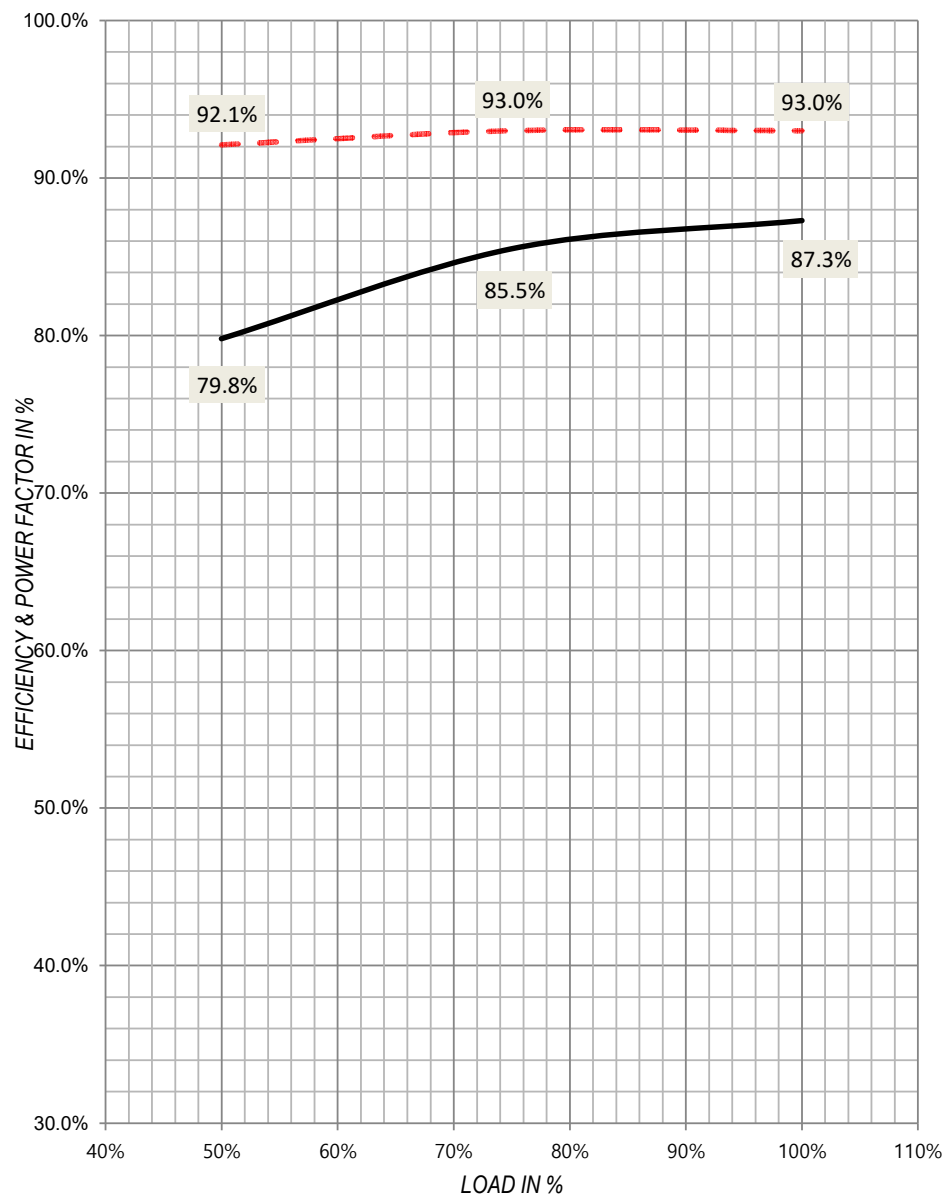
	A : SPEED-TORQUE CURVE AT	100% RATED VOLTAGE
	B : SPEED-TORQUE CURVE AT	90% RATED VOLTAGE
	C : SPEED-TORQUE CURVE AT	80% RATED VOLTAGE
	D : SPEED-CURRENT CURVE AT	100% RATED VOLTAGE
	E : SPEED-CURRENT CURVE AT	90% RATED VOLTAGE
	F : SPEED-CURRENT CURVE AT	80% RATED VOLTAGE

HICO 3 PHASE INDUCTION MOTOR			THERMAL LIMIT & TIME - CURRENT CURVE		Curve No.
					1TL
OUTPUT	50	HP	POLES	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 ² of LOAD :	-	lb·ft ²	GD ² of MOTOR	4.859	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	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 ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	4.859	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 VOLTAGE-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 VOLTAGE-STAR-DELTA AND PART WINDING (at 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	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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