

HICO 3 PHASE INDUCTION MOTOR	PERFORMANCE DATASHEET	ISSUED	01/15/2026
		MODEL	100HP 4P

NAMEPLATE INFORMATION										
OUTPUT		RPM	VOLTS	Hz	FRAME SIZE	ENCLOSURE TYPE	S.F.	INS. CALSS	RATING	AMB. TEMP.
HP	kW									
100	75	1785	575	60	405T	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	95.5	95.1	83.7	80.9	73.3

CURRENT					
FULL LOAD AMPS	3/4 LOAD AMPS	1/2 LOAD AMPS	NO LOAD AMPS	STARTING CURRENT AMPS	STARTING CURRENT % FLC
93.8	72.7	53.7	30.1	609.7	650

TORQUE				ALLOWABLE STARTS PER HOUR	
FULL LOAD (lb-ft)	LOCKED ROTOR % FLT	BREAK DOWN % FLT	PULL UP % FLT	COLD	HOT
294.4	170	265	115	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)			
29.466	441	999	75	55	1130

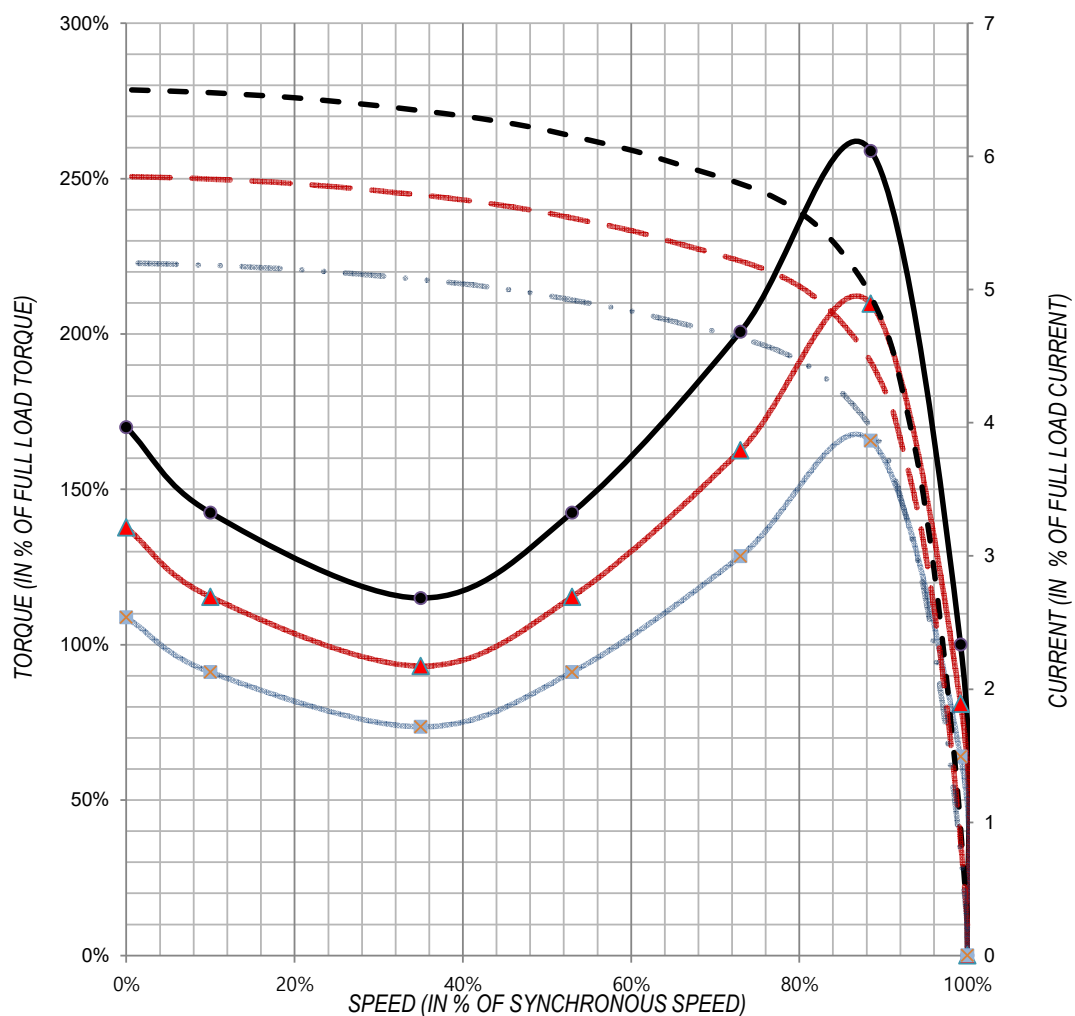
BEARING		GREASE	MOUNTING	
DE	ODE		TYPE OF CONSTRUCTION	TERMINAL BOX DESIGN
6316C3	6313C3	GREASE(MOBIL Polyrex EM)	RIGID MOUNTING	NEMA

INVERTER DUTY DATA					
TYPE	HZ	HP	RPM	TORQUE(LB-FT)	NOTE
VARIABLE TORQUE	3~60	0.0125~100	90~1800	0.736~294.4	WITH TEMP. RISE CLASS F & S.F. 1.0
CONSTANT TORQUE	6~60	10~100	180~1800	294.4	
CONSTANT HP	60~90	100	1800~2700	294.4~196.267	

DRAWING NO.	ES1AS180424	REVISION	0.1
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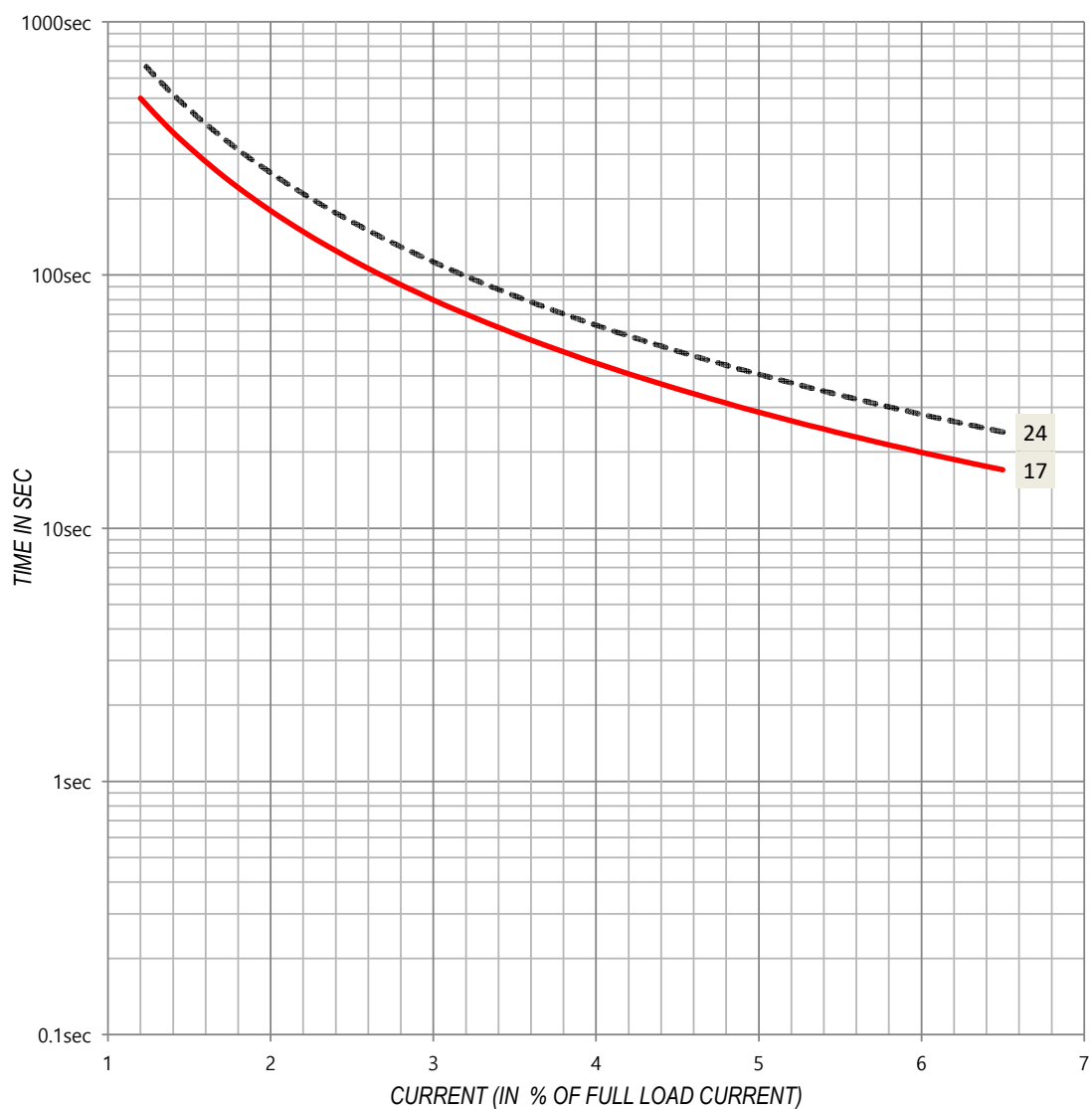
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HICO 3 PHASE INDUCTION MOTOR	SPEED - TORQUE & CURRENT CURVE			Curve No.	
				1ST	
OUTPUT	100	HP	POLES	4	P
VOLTAGE	575	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	294.4	lb-ft	FULL LOAD CURRENT	93.8	A
LOCKED ROTOR TORQUE	170	%	LOCKED-ROTOR CURRENT	650	%
BREAKDOWN TORQUE	265	%	SPEED (at FULL LOAD)	1785	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	29.466	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	100	HP	POLES	4	P
VOLTAGE	575	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	294.4	lb-ft	FULL LOAD CURRENT	93.8	A
LOCKED ROTOR TORQUE	170	%	LOCKED-ROTOR CURRENT	650	%
BREAKDOWN TORQUE	265	%	SPEED (at FULL LOAD)	1785	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	29.466	lb-ft ²

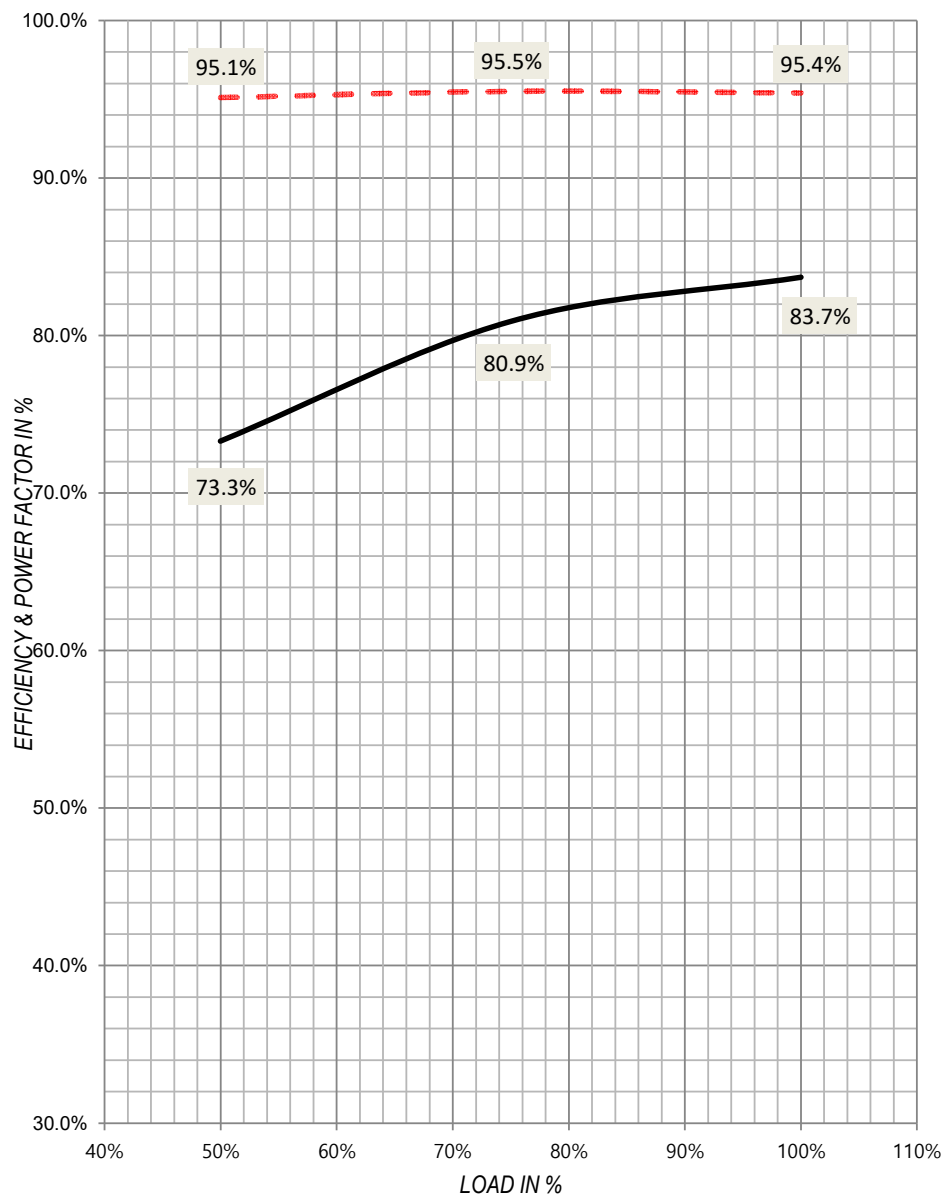


NOTE

- 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	100	HP	POLES	4	P
VOLTAGE	575	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	294.4	lb-ft	FULL LOAD CURRENT	93.8	A
LOCKED ROTOR TORQUE	170	%	LOCKED-ROTOR CURRENT	650	%
BREAKDOWN TORQUE	265	%	SPEED (at FULL LOAD)	1785	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	29.466	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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