

HICO 3 PHASE INDUCTION MOTOR	PERFORMANCE DATASHEET	ISSUED	01/15/2026
		MODEL	20HP 6P

NAMEPLATE INFORMATION										
OUTPUT		RPM	VOLTS	Hz	FRAME SIZE	ENCLOSURE TYPE	S.F.	INS. CALSS	RATING	AMB. TEMP.
HP	kW									
20	15	1180	575	60	286T	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.					
90.2	91.7	92.2	91.9	76.8	71.5	60.4

CURRENT					
FULL LOAD AMPS	3/4 LOAD AMPS	1/2 LOAD AMPS	NO LOAD AMPS	STARTING CURRENT AMPS	STARTING CURRENT % FLC
21.3	17.0	13.5	9.5	119.3	560

TORQUE				ALLOWABLE STARTS PER HOUR	
FULL LOAD (lb-ft)	LOCKED ROTOR % FLT	BREAK DOWN % FLT	PULL UP % FLT	COLD	HOT
89.1	160	205	135	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)			
8.940	262	615	69	55	439

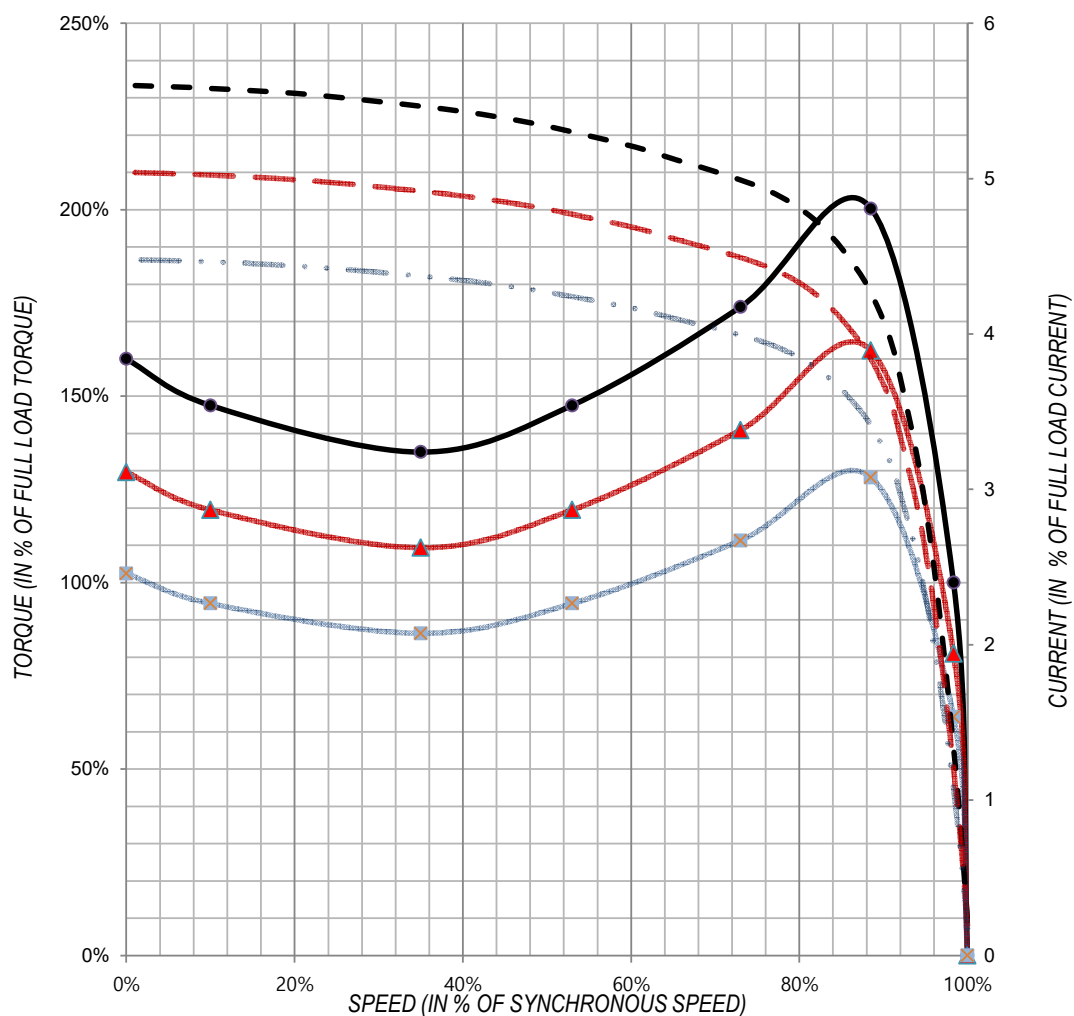
BEARING		GREASE	MOUNTING	
DE	ODE		TYPE OF CONSTRUCTION	TERMINAL BOX DESIGN
6312ZZ	6310ZZ	N/A	RIGID MOUNTING	NEMA

INVERTER DUTY DATA					
TYPE	HZ	HP	RPM	TORQUE(LB-FT)	NOTE
VARIABLE TORQUE	3~60	0.0025~20	60~1200	0.223~89.1	WITH TEMP. RISE CLASS F & S.F. 1.0
CONSTANT TORQUE	6~60	2~20	120~1200	89.1	
CONSTANT HP	60~90	20	1200~1800	89.1~59.4	

DRAWING NO.	ES1AS180412	REVISION	0.1
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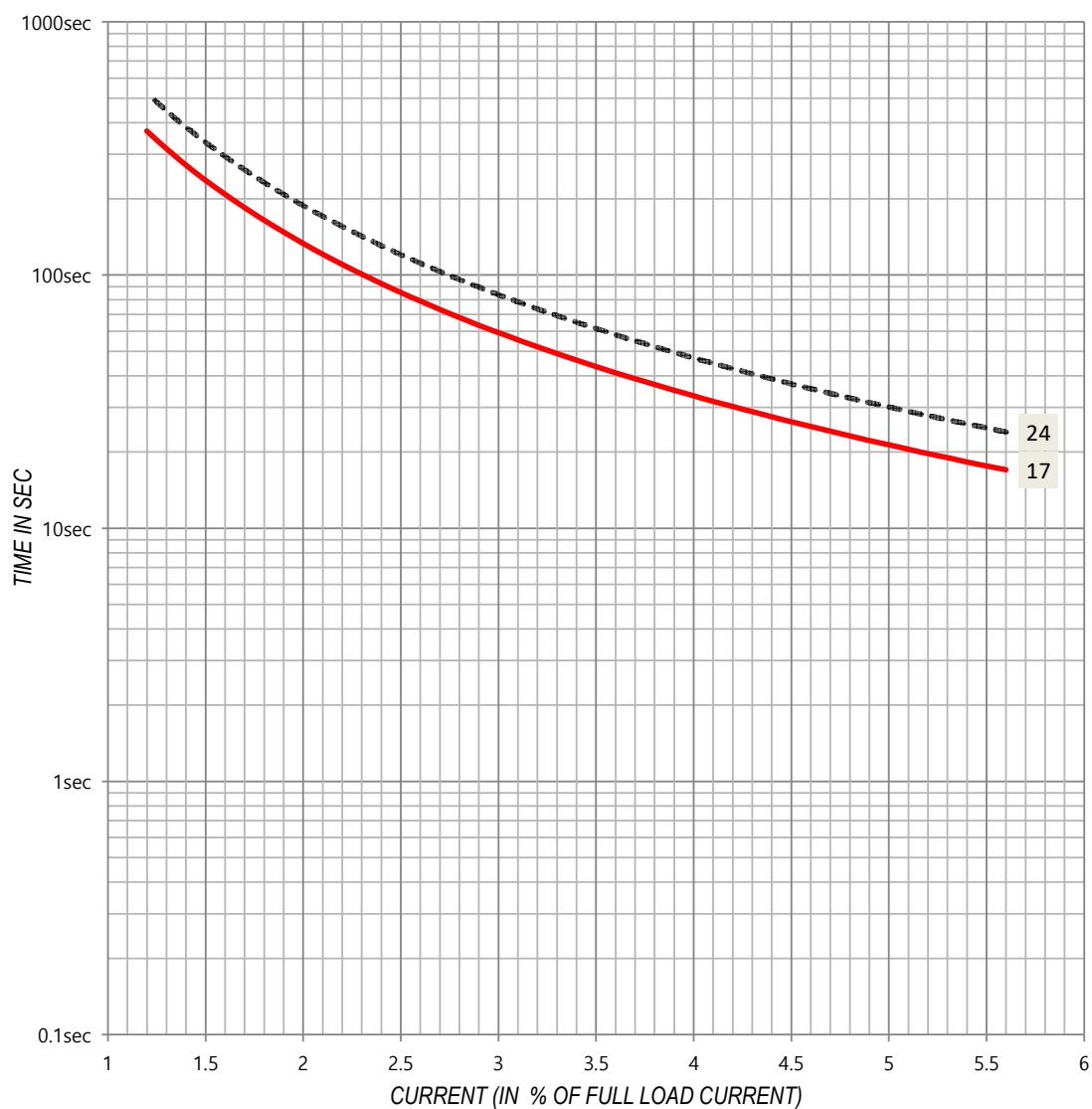
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HICO 3 PHASE INDUCTION MOTOR	SPEED - TORQUE & CURRENT CURVE				Curve No.
					1ST
OUTPUT	20	HP	POLES	6	P
VOLTAGE	575	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	89.1	lb-ft	FULL LOAD CURRENT	21.3	A
LOCKED ROTOR TORQUE	160	%	LOCKED-ROTOR CURRENT	560	%
BREAKDOWN TORQUE	205	%	SPEED (at FULL LOAD)	1180	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	8.94	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

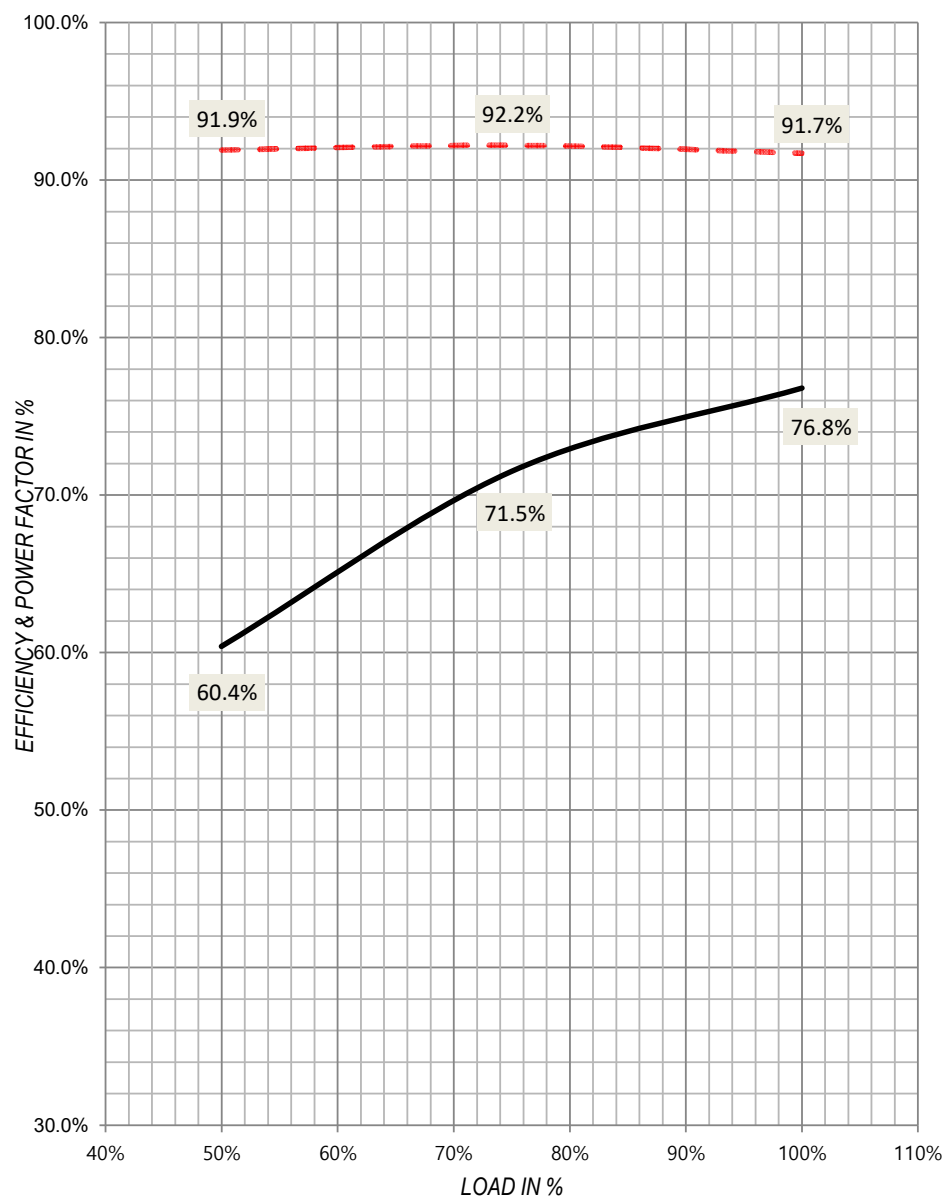
HICO 3 PHASE INDUCTION MOTOR	THERMAL LIMIT & TIME - CURRENT CURVE		Curve No.	
			1TL	
OUTPUT	20	HP	POLES	6 P
VOLTAGE	575	V	FREQUENCY	60 Hz
FULL LOAD TORQUE	89.1	lb-ft	FULL LOAD CURRENT	21.3 A
LOCKED ROTOR TORQUE	160	%	LOCKED-ROTOR CURRENT	560 %
BREAKDOWN TORQUE	205	%	SPEED (at FULL LOAD)	1180 RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	8.94 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	20	HP	POLES	6	P
VOLTAGE	575	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	89.1	lb-ft	FULL LOAD CURRENT	21.3	A
LOCKED ROTOR TORQUE	160	%	LOCKED-ROTOR CURRENT	560	%
BREAKDOWN TORQUE	205	%	SPEED (at FULL LOAD)	1180	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	8.94	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.
							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
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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