

HICO 3 PHASE INDUCTION MOTOR	PERFORMANCE DATASHEET	ISSUED	01/15/2026
		MODEL	20HP 2P

NAMEPLATE INFORMATION										
OUTPUT		RPM	VOLTS	Hz	FRAME SIZE	ENCLOSURE TYPE	S.F.	INS. CALSS	RATING	AMB. TEMP.
HP	kW									
20	15	3540	230/460	60	256T	TEFC	1.25	F	CONT.	40°C
TEMP. RISE	NEMA DESIGN	kVA CODE	Class/Division Hazardous Location							
B	B	F	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.					
89.5	91	91.2	90.3	85.4	79.9	68.5

CURRENT					
FULL LOAD AMPS	3/4 LOAD AMPS	1/2 LOAD AMPS	NO LOAD AMPS	STARTING CURRENT AMPS	STARTING CURRENT % FLC
48.2/24.1	38.5/19.3	30.3/15.1	16.6/8.3	269.9/135	560

* Usable at 208V: 53.1 AMPS (FULL LOAD)

* Usable at 20HP 50Hz 380V 29.2A 2920R.P.M. S.F. 1.0 EFF. 89.5% (IE1)

TORQUE				ALLOWABLE STARTS PER HOUR	
FULL LOAD (lb-ft)	LOCKED ROTOR % FLT	BREAK DOWN % FLT	PULL UP % FLT	COLD	HOT
29.7	190	285	152	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)			
1.151	21	78	72	55	288

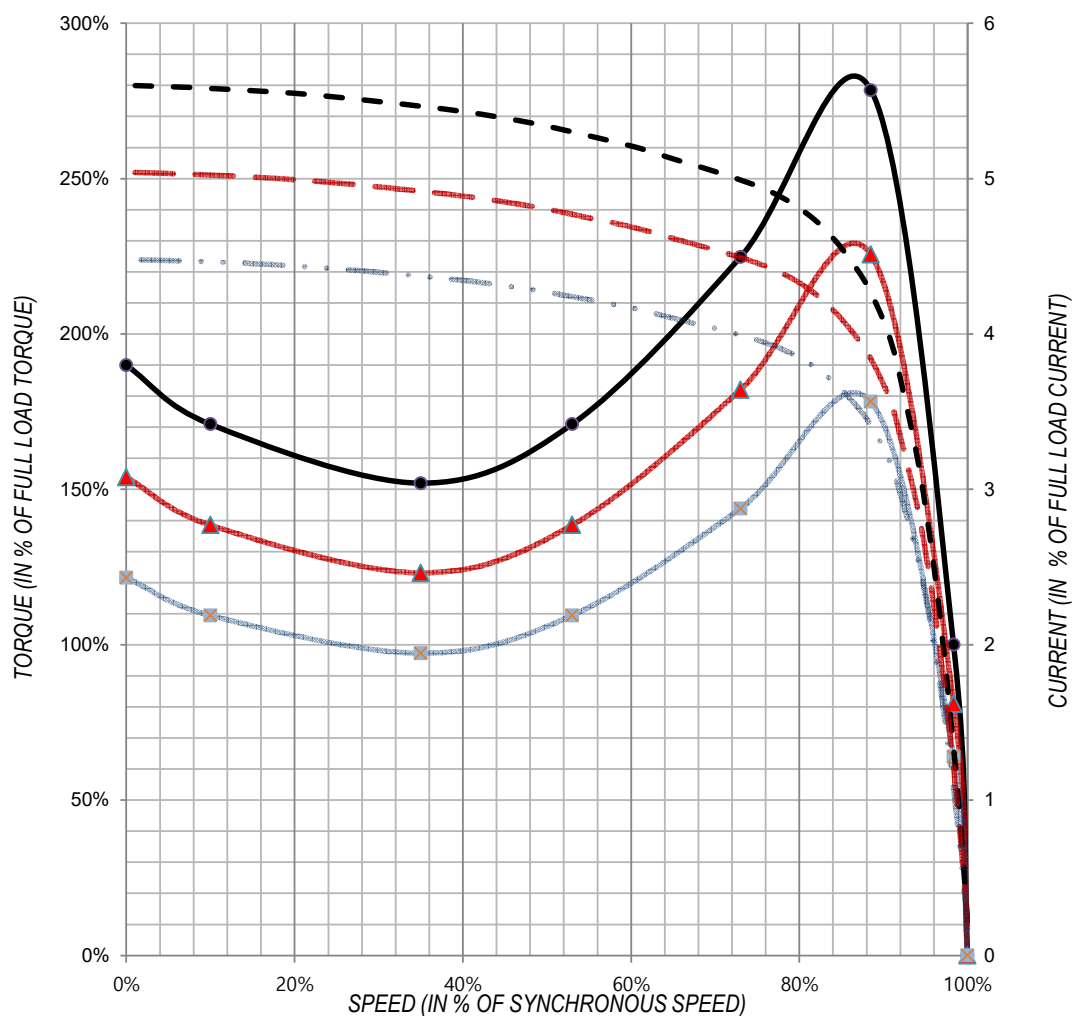
BEARING		GREASE	MOUNTING	
DE	ODE		TYPE OF CONSTRUCTION	TERMINAL BOX DESIGN
6309ZZ	6309ZZ	N/A	RIGID MOUNTING	NEMA

INVERTER DUTY DATA					
TYPE	HZ	HP	RPM	TORQUE(LB-FT)	NOTE
VARIABLE TORQUE	3~60	0.0025~20	180~3600	0.074~29.7	WITH TEMP. RISE CLASS F & S.F. 1.0
CONSTANT TORQUE	6~60	2~20	360~3600	29.7	
CONSTANT HP	60~90	20	3600~5400	29.7~19.8	

DRAWING NO.	ES1AS180408	REVISION	2.1
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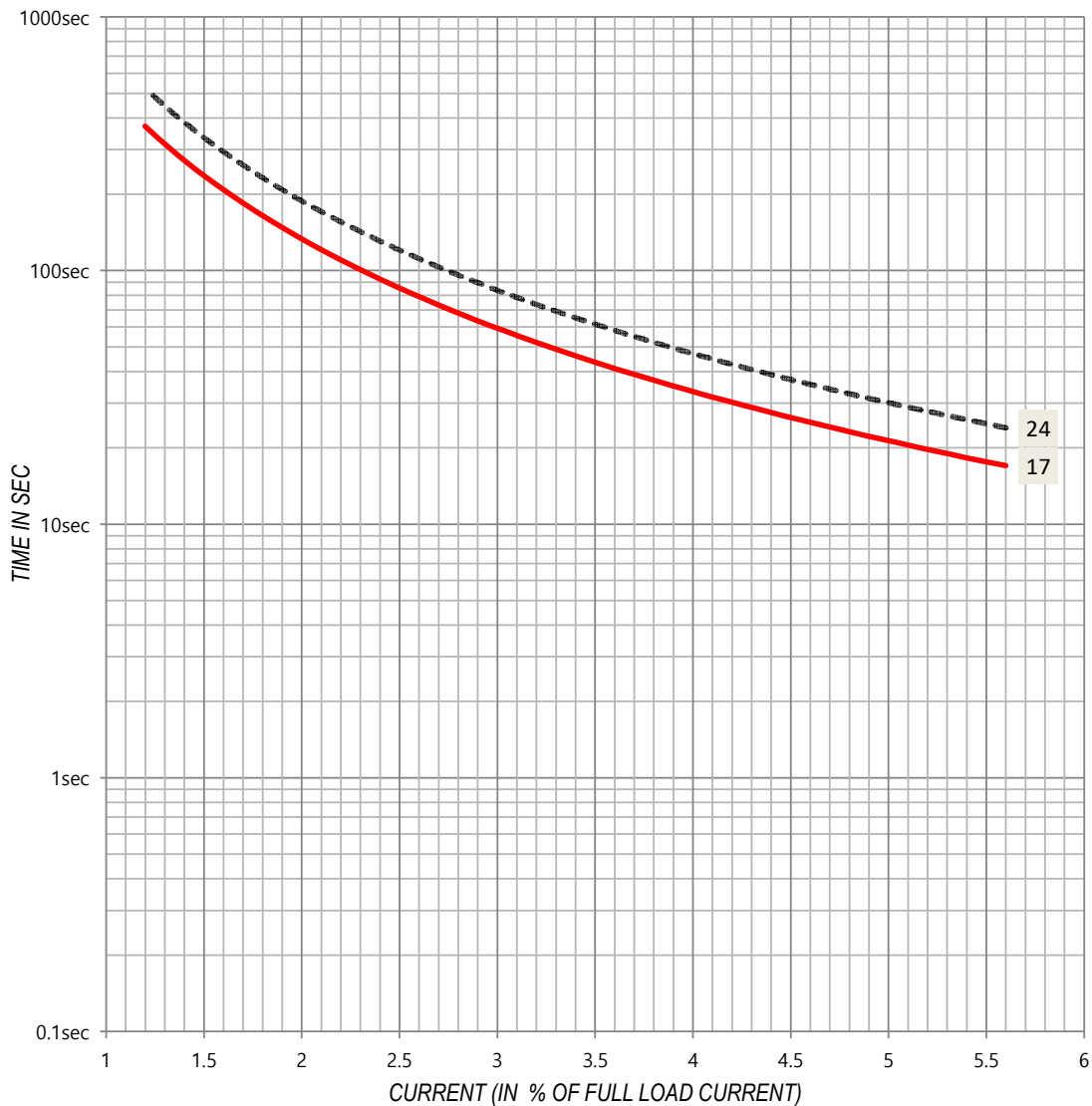
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HICO 3 PHASE INDUCTION MOTOR	SPEED - TORQUE & CURRENT CURVE			Curve No.	
				1ST	
OUTPUT	20	HP	POLES	2	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	29.7	lb-ft	FULL LOAD CURRENT	48.2/24.1	A
LOCKED ROTOR TORQUE	190	%	LOCKED-ROTOR CURRENT	560	%
BREAKDOWN TORQUE	285	%	SPEED (at FULL LOAD)	3540	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	1.151	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	2	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	29.7	lb-ft	FULL LOAD CURRENT	48.2/24.1	A
LOCKED ROTOR TORQUE	190	%	LOCKED-ROTOR CURRENT	560	%
BREAKDOWN TORQUE	285	%	SPEED (at FULL LOAD)	3540	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	1.151	lb-ft ²



- NOTE
- A : THERMAL LIMIT CURVE AT HOT CONDITION

B : THERMAL LIMIT CURVE AT COLD CONDITION

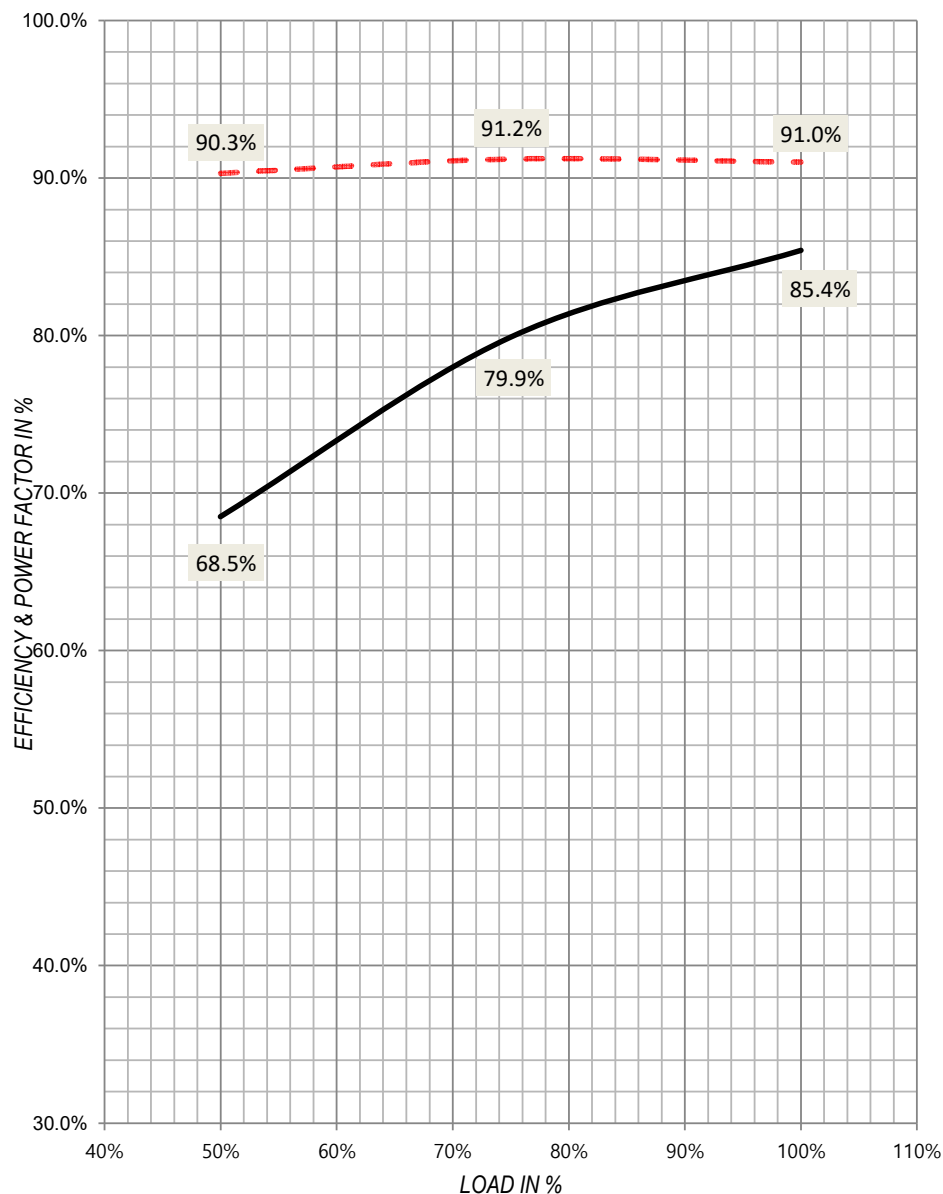
C : ※TIME-CURRENT CURVES(C,D,E) NEED BELOW DATA TO BE DRAWN

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	2	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	29.7	lb-ft	FULL LOAD CURRENT	48.2/24.1	A
LOCKED ROTOR TORQUE	190	%	LOCKED-ROTOR CURRENT	560	%
BREAKDOWN TORQUE	285	%	SPEED (at FULL LOAD)	3540	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	1.151	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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