

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	256TD	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	310

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

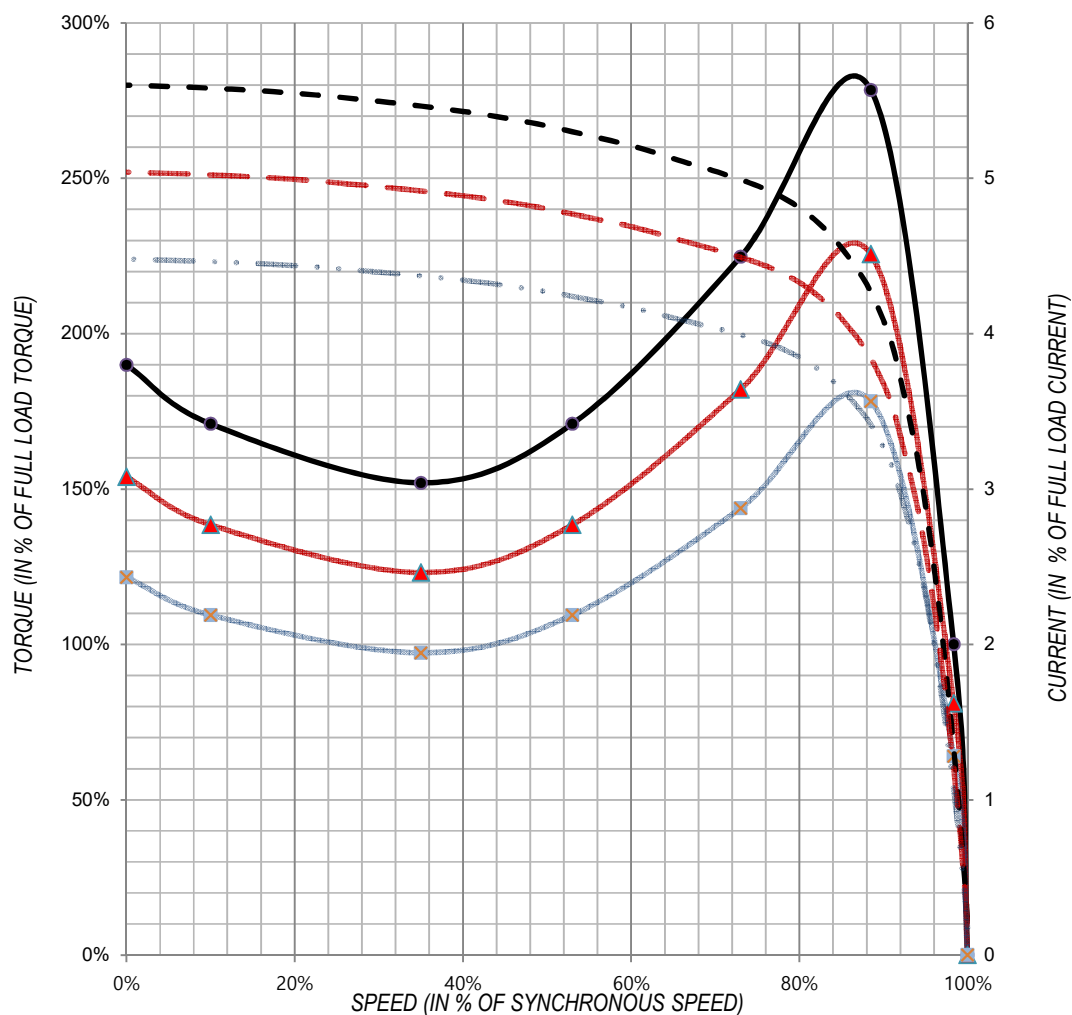
INVERTER DUTY DATA					
TYPE	HZ	HP	RPM	TORQUE(LB-FT)	NOTE
VARIABLE TORQUE	3~60	0.0025~20	180~3600	0.074~29.7	WITH TEMP. RISE CLASS F & S.F. 1.0
CONSTANT TORQUE	6~60	2~20	360~3600	29.7	
CONSTANT HP	60~90	20	3600~5400	29.7~19.8	

DRAWING NO.	ES1AS185708	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	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

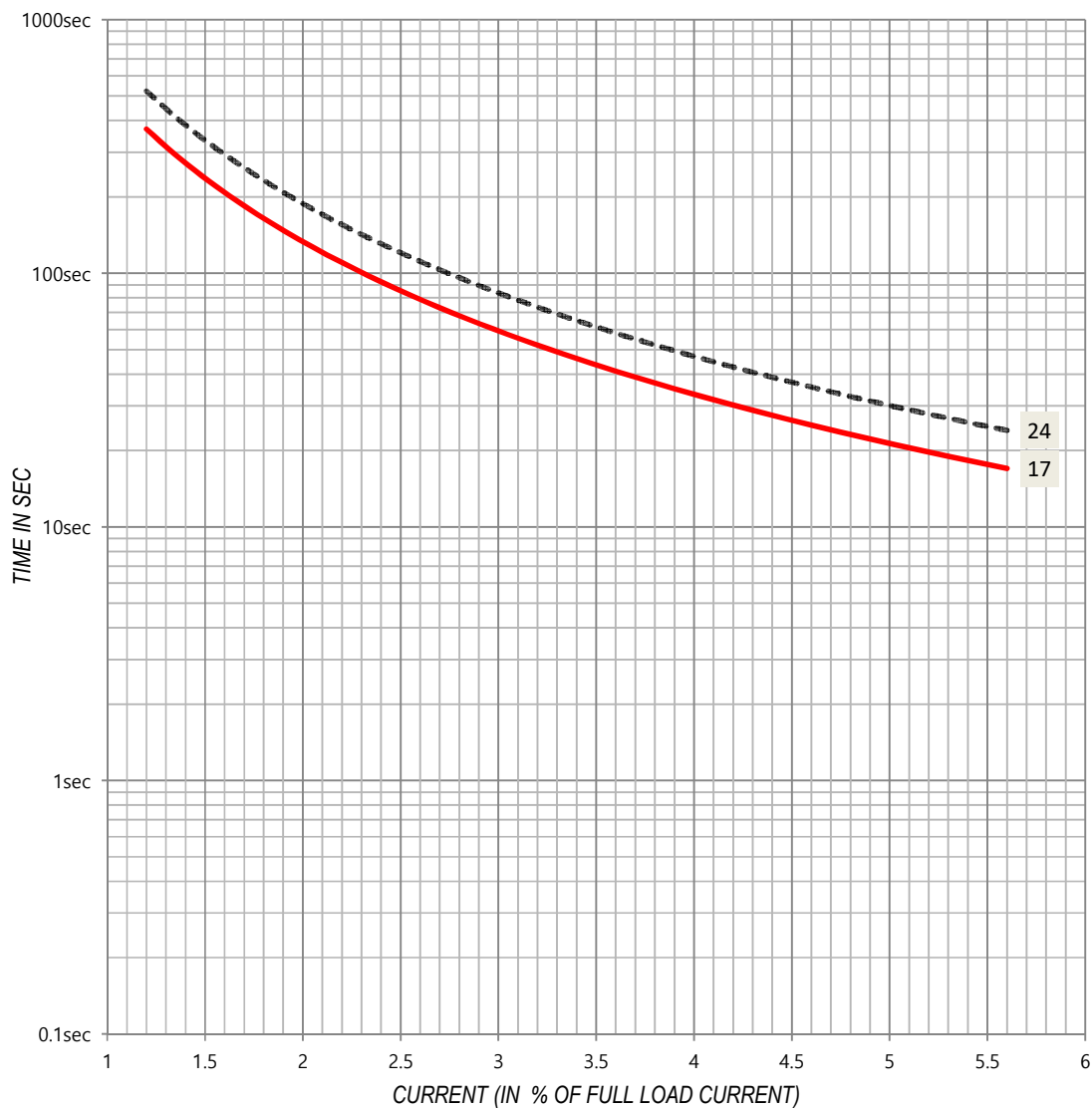


NOTE

	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

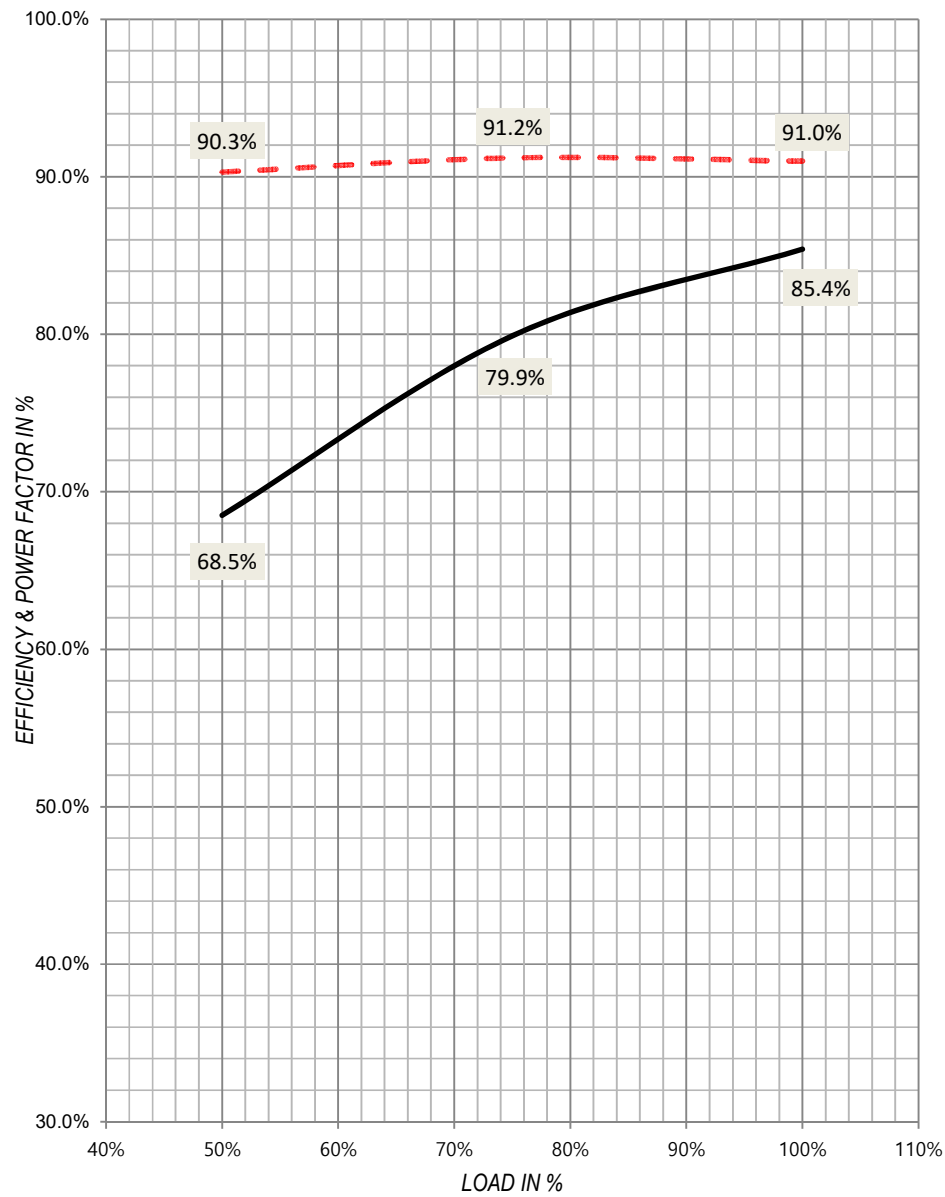
OUTPUT	20	HP	POLES	2	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	29.7	lb-ft	FULL LOAD CURRENT	48.2/24.1	A
LOCKED ROTOR TORQUE	190	%	LOCKED-ROTOR CURRENT	560	%
BREAKDOWN TORQUE	285	%	SPEED (at FULL LOAD)	3540	RPM
GD ² of LOAD :	-	lb·ft ²	GD ² of MOTOR	1.151	lb·ft ²



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.	STAR CONN.	DELTA CONN.	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 (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				LOW VOLTAGE PART-WINDING/STAR-DELTA STARTING			
		HIGH VOLTAGE DIRECT-ON-LINE STARTING				HIGH VOLTAGE DIRECT-ON-LINE STARTING			

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