

HICO 3 PHASE INDUCTION MOTOR	PERFORMANCE DATASHEET	ISSUED	01/15/2026
		MODEL	7.5HP 6P

NAMEPLATE INFORMATION										
OUTPUT		RPM	VOLTS	Hz	FRAME SIZE	ENCLOSURE TYPE	S.F.	INS. CALSS	RATING	AMB. TEMP.
HP	KW									
7.5	5.5	1175	230/460	60	254TD	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	90.2	76.9	70.5	58.6

CURRENT					
FULL LOAD AMPS	3/4 LOAD AMPS	1/2 LOAD AMPS	NO LOAD AMPS	STARTING CURRENT AMPS	STARTING CURRENT % FLC
20.1/10.0	16.4/8.2	13.3/6.6	9.2/4.6	102.5/51	510

* Usable at 208V: 21.7 AMPS (FULL LOAD)

* Usable at 7.5HP 50Hz 380V 12A 970R.P.M. S.F. 1.0 EFF. 89.2% (IE3)

TORQUE				ALLOWABLE STARTS PER HOUR	
FULL LOAD (lb-ft)	LOCKED ROTOR % FLT	BREAK DOWN % FLT	PULL UP % FLT	COLD	HOT
33.5	160	210	131	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)			
4.550	104	218	68	55	303

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

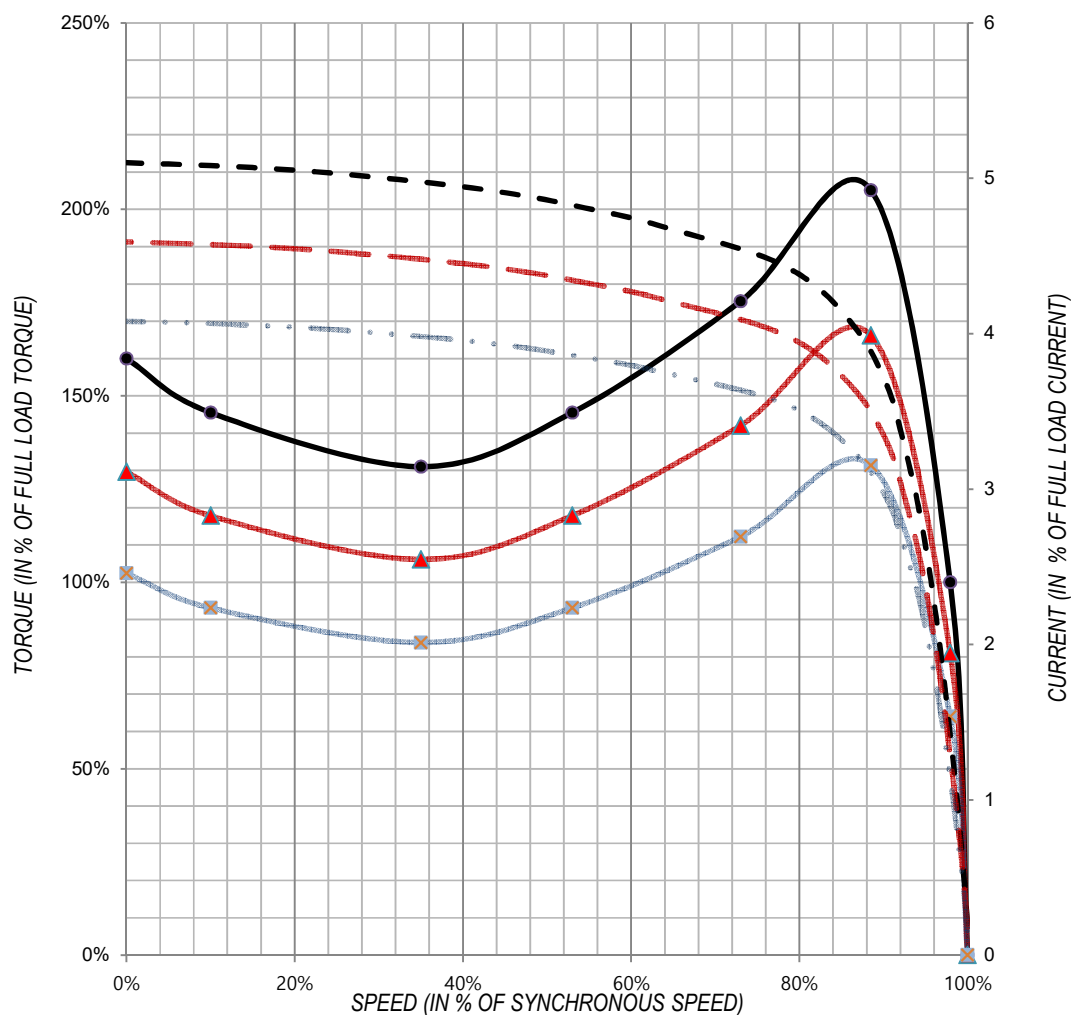
INVERTER DUTY DATA					
TYPE	HZ	HP	RPM	TORQUE(LB-FT)	NOTE
VARIABLE TORQUE	3~60	0.0009~7.5	60~1200	0.084~33.5	WITH TEMP. RISE CLASS F & S.F. 1.0
CONSTANT TORQUE	6~60	0.75~7.5	120~1200	33.5	
CONSTANT HP	60~90	7.5	1200~1800	33.5~22.333	

DRAWING NO.	ES1AS185707	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	7.5	HP	POLES	6	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	33.5	lb-ft	FULL LOAD CURRENT	20.1/10	A
LOCKED ROTOR TORQUE	160	%	LOCKED-ROTOR CURRENT	510	%
BREAKDOWN TORQUE	210	%	SPEED (at FULL LOAD)	1175	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	4.55	lb-ft ²

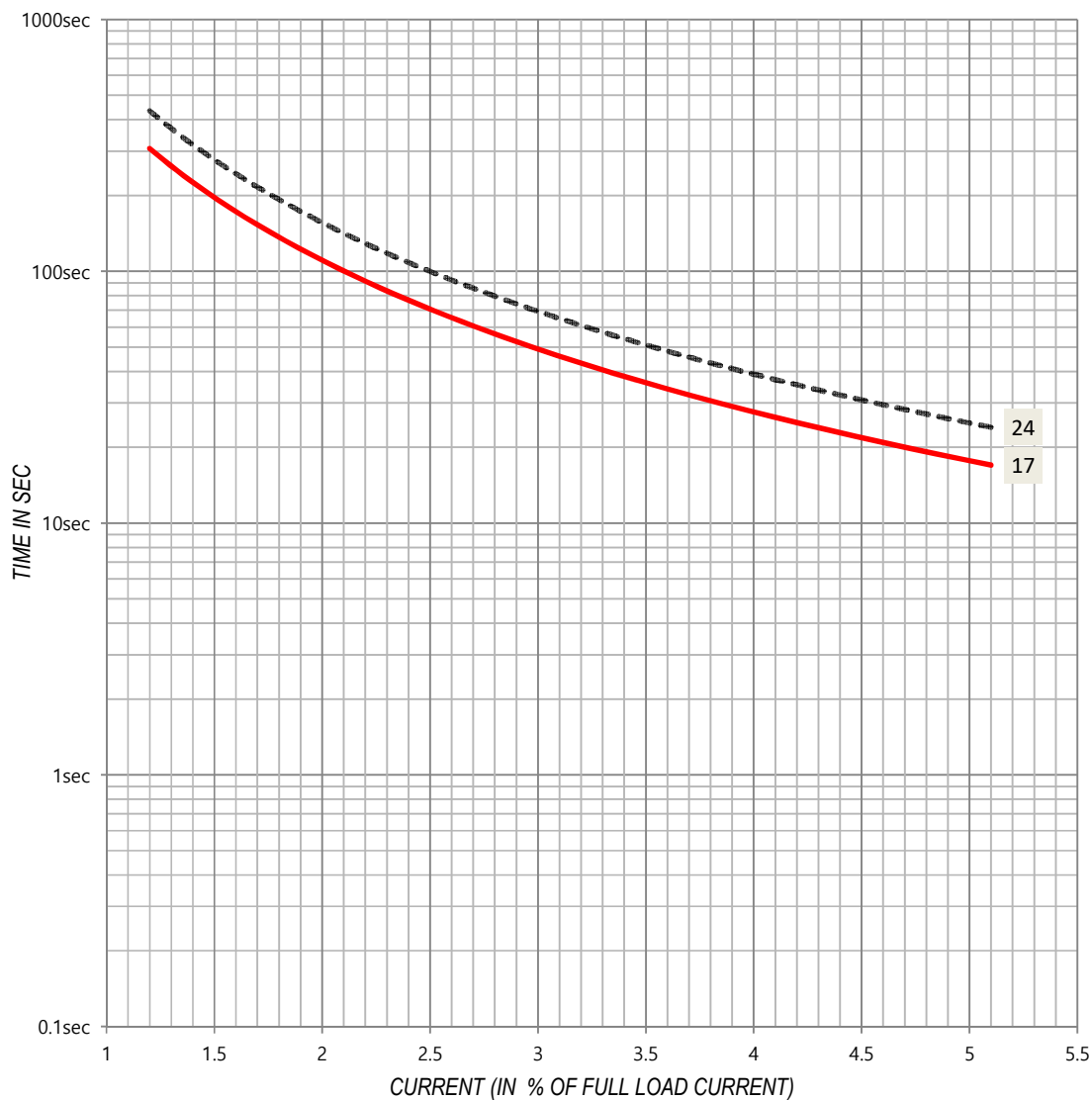


NOTE

	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	7.5	HP	POLES	6	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	33.5	lb-ft	FULL LOAD CURRENT	20.1/10	A
LOCKED ROTOR TORQUE	160	%	LOCKED-ROTOR CURRENT	510	%
BREAKDOWN TORQUE	210	%	SPEED (at FULL LOAD)	1175	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	4.55	lb-ft ²

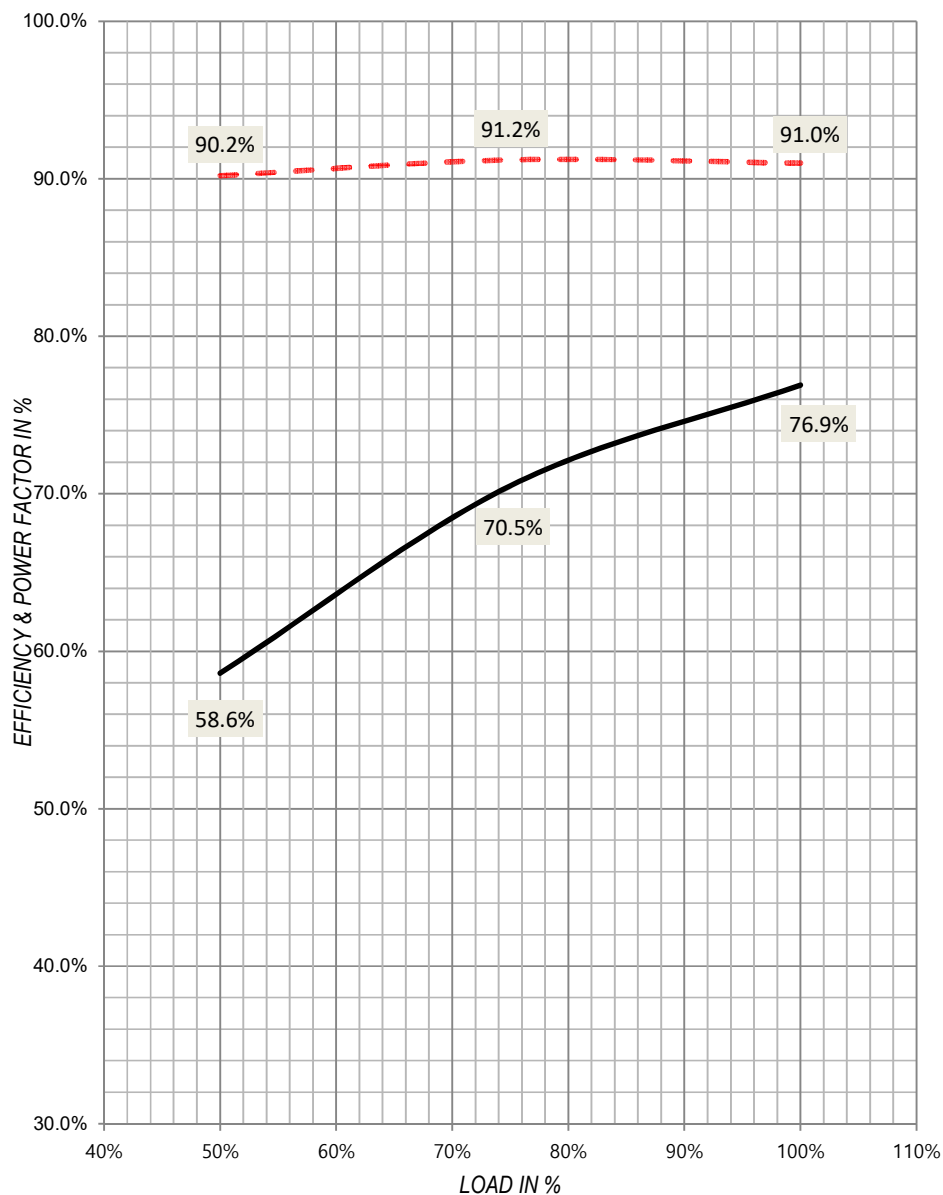


NOTE

- 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	7.5	HP	POLES	6	P
VOLTAGE	230/460	V	FREQUENCY	60	Hz
FULL LOAD TORQUE	33.5	lb-ft	FULL LOAD CURRENT	20.1/10	A
LOCKED ROTOR TORQUE	160	%	LOCKED-ROTOR CURRENT	510	%
BREAKDOWN TORQUE	210	%	SPEED (at FULL LOAD)	1175	RPM
GD ² of LOAD :	-	lb-ft ²	GD ² of MOTOR	4.55	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 VOTAGE - 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 VOTAGE - 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 HIGH VOLTAGE DIRECT-ON-LINE STARTING			LOW VOLTAGE PART-WINDING/STAR-DELTA STARTING HIGH VOLTAGE DIRECT-ON-LINE STARTING				

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