

高壓全密型TEFC泵浦用馬達(實心軸)

MODEL : AEHCED

HIGH THRUST SOLIDSHAFT PUMP MOTORS

MEDIUM VOLTAGE SQUIRREL CAGE

FRAME SIZE (EHV) 449VP



DWG NO.

3A057M087E

REV. 00

		SPECIFICATION TABLE	MODEL
		HIGH THRUST SOLIDSHAFT PUMP MOTORS	AEHCED
		MEDIUM VOLTAGE SQUIRREL CAGE	
ITEM		STANDARD SPECIFICATION	
R A T I N G	KIND OF MOTOR	SQUIRREL-CAGE INDUCTION MOTOR (SCIM), VSS, TEFC	
	DESIGN STANDARD	NEMA MG-1, PREMIUM EFFICIENCY	
	VOLTAGE	2300V/4000V, 4160V	
	FREQUENCY	60HZ	
	OUTPUT RANGE	125 ~ 250HP	
	R.P.M. (SYN.)	1800 ~ 900 R.P.M. (4 ~ 8 POLE)	
	TIME DUTY	CONTINUOUS , S.F. 1.15 (S1, MCR) VFD:CONTINUOUS S.F. 1.0 (S1, MCR)	
	FRAME SIZE (EHV)	449VP	
	PROTECTION ENCLOSURE	TOTALLY ENCLOSED (IPW44)	
	COOLING METHOD	SELF EXTERNAL FAN, SURFACE COOLING (IC 411)	
MOUNTING	FLANGE MOUNTING (IM3011)		
A P P L I C A T I O N	POWER CONDITION	VOLTAGE : $\pm 10\%$, FREQUENCY : $\pm 5\%$, AND $\pm 10\%$ MAX. OF COMBINED VOLTAGE AND FREQUENCY, BUT FREQUENCY VARIATION DOES NOT EXCEED $\pm 5\%$	
	DESIGNED PRIMARILY	FOR DEEP WELL TURBINE PUMP	
	ENVIRONMENT CONDITIONS	PLACE : OUTDOOR, NON-HAZARDOUS, CSA CLASS I , DIV. 2, GROUP, B, C, D T3 (OPTION) AMBIENT TEMPERATURE : $-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$, RELATIVE HUMIDITY : LESS THAN 90% RH (NON-CONDENSATION), ALTITUDE : LESS THAN 3,300 ft	
	DRIVE METHOD	DIRECT COUPLING	
	DIRECTION OF ROTATION	COUNTER-CLOCK-WISE FACING THE COUPLING END	
	METHOD OF STARTING	ACROSS THE LINE OR REDUCED VOLTAGE STARTING	
P E R F O R M A N C E	TEST PROCEDURE	IEEE-112 METHOD B	
	TYPICAL PERFORMANCE	AS DWG NO. 3A057M089E	
	TEMPERATURE RISE	NOT TO EXCEED 105°C FOR S.F. 1.15 OR 80°C FOR S.F. 1.0 BY RESISTANCE METHOD	
	OVER SPEED	125% SYN. R.P.M. FOR TWO MIN WHILE HORSEPOWER $\leq 200\text{HP}$ (4 POLE) 120% SYN. R.P.M. FOR TWO MIN WHILE HORSEPOWER $> 200\text{HP}$ (4 POLE) 150% SYN. R.P.M. FOR TWO MIN WHILE HORSEPOWER $\leq 200\text{HP}$ (6 & 8 POLE)	
	SPEED RANGE	VARIABLE TORQUE : 10 : 1, CONSTANT TORQUE : 3 : 1	
	OVER TORQUE	160% RATED TORQUE FOR 15 SEC	

PERFORMANCE DATA

MODEL

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HIGH THRUST SOLIDSHAFT PUMP MOTORS MEDIUM VOLTAGE SQUIRREL CAGE



TEFC, NEMA DESIGN B, CODE G, CLASS F, 40°C AMBIENT,
CONTINUOUS DUTY, 1.15 S.F. 2300/4000V, 3300V, 4160V 60HZ

TYPICAL PERFORMANCE

(2300V)

HP	FULL LOAD RPM	FRAME SIZE (EHV)	EFFICIENCY						POWER FACTOR			CURRENT		TORQUE			ROTOR WR ² lb-ft ²	DOWN THRUST LBS	APPROX. ROTOR WEIGHT LBS	APPROX. WEIGHT LBS	REED FREQ. Hz
			FULL LOAD %		3/4 LOAD	1/2 LOAD	FULL LOAD	3/4 LOAD	1/2 LOAD	FULL LOAD	LOCKED ROTOR	FULL LOAD	LOCKED ROTOR	BREAK- DOWN							
			NOM.	MIN.	NOM.	NOM.	%	%	%	A	A	lb-ft	%FLT	%FLT							
125	1185	449VP	94.6	93.6	94.5	93.6	79.7	73.8	62.1	31	198	554.1	80	200	68.7	11400	710	2750	38		
	883	449VP	93.7	92.5	93.6	93.1	76.9	71.3	60.1	32	198	743.7	80	210	97.8	12700	870	3130	35		
150	1780	449VP	95.0	94.1	94.6	93.5	83.6	80.2	71.7	35	237	442.7	110	210	58.1	10000	640	2660	38		
	1185	449VP	95.0	94.1	94.7	93.9	80.1	74.5	62.7	36	237	665.0	80	200	84.1	11400	790	2950	36		
200	1780	449VP	95.0	94.1	94.8	93.9	82.9	79.1	69.5	47	316	590.2	110	210	71.7	10000	710	2830	37		
	1185	449VP	95.0	94.1	94.8	94.2	76.2	69.1	56.2	51	316	886.6	80	200	94.2	11400	840	3120	35		
250	1780	449VP	95.0	94.1	94.9	94.2	83.7	79.8	70.7	58	395	737.8	110	210	83.0	10000	760	3010	36		

NOTE : 1. THE ABOVE ARE TYPICAL VALUES BASED ON TEST ACCORDING TO ANSI/IEEE STANDARD 112 METHOD B.

2. BREAKDOWN & LOCKED ROTOR TORQUES ARE SHOWN AS AVERAGE EXPECTED VALUES.

3. EFFICIENCY, POWER FACTOR, SPEED AND TORQUE ARE THE SAME FOR OTHER VOLTAGES. CURRENT VALUES VARY INVERSELY WITH VOLTAGE.

4. DECLARED EFFICIENCY HAVN'T TAKEN INTO ACCOUNT OF THRUST LOAD LOSSES

5. TOLERANCE ACCORDING TO NEMA MG1-12& IEC 34-1

6. THRUST LOAD LOSSES ESTIMATED OF ANGULAR CONTACT BALL BEARING AS FOLLOWS : (ACCORDING TO NEMA STANDARD MG1-12.7)

FRAME SIZE	LOSS HP /100 RPM RPM/1000 LB THRUST
449VP	0.0194

7. REDUCING THE THRUST LOAD WILL INCREASE BEARING LIFE AS FOLLOWS :

THRUST(%)	100	80	70	58	51
BEARING LIFE(Hrs.)	8800	15000	20000	30000	40000

8. DATA SUBJECT TO CHANGE WITHOUT NOTICE

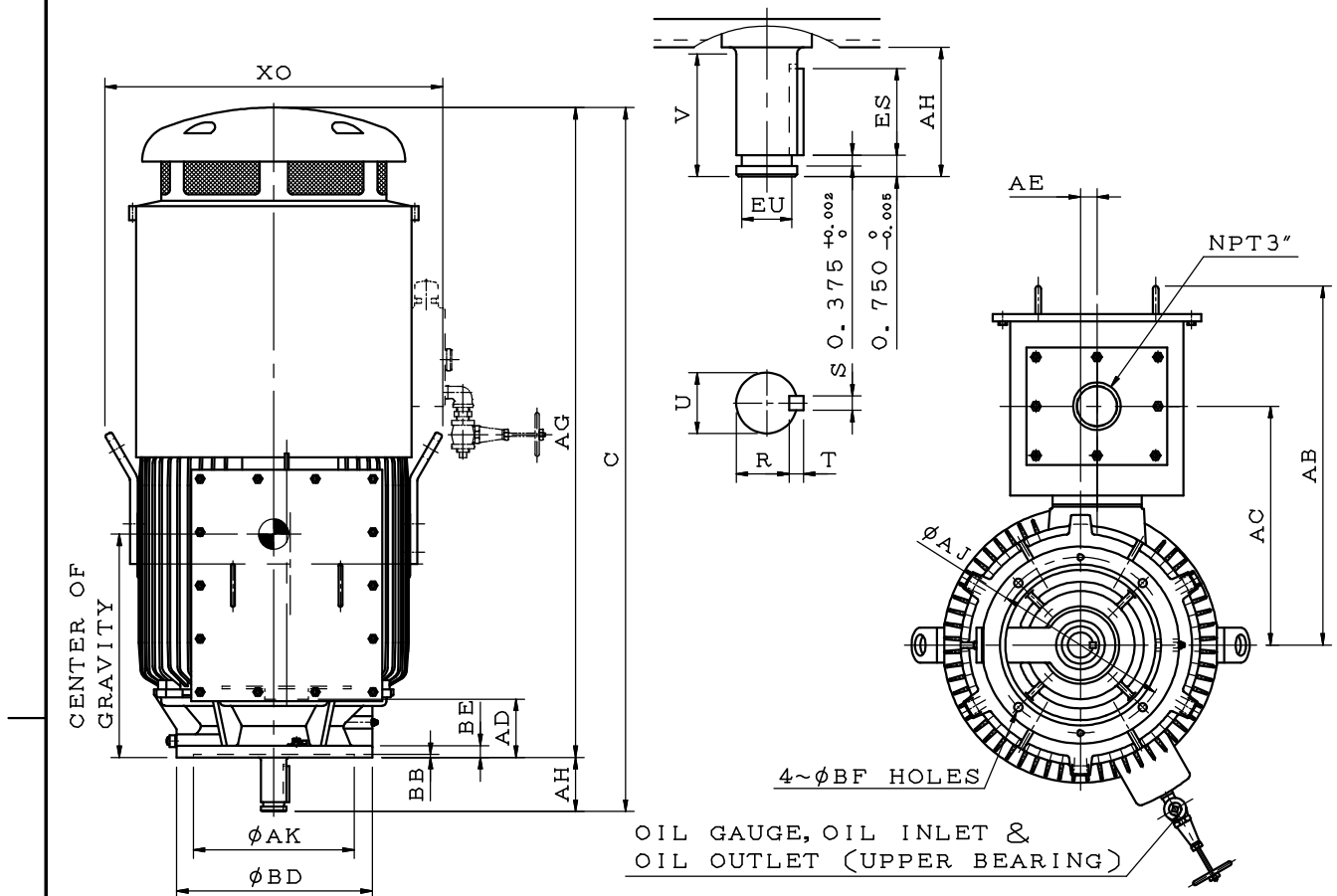
OUTLINE DIMENSIONS SHEET

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TOTALLY ENCLOSED FAN COOLED SQUIRREL CAGE



DIMENSIONS IN INCHES

FRAME SIZE (EHV)	MOUNTING						C	AG	XO	U	AH	V	EU	R
	AK	AJ	BD	BF	BB	BE								
449VP	13.50	14.75	20.00	0.69	0.25	1.20	69.06	64.06	30.55	2.625	5.00	4.75	2.250	2.275

FRAME SIZE (EHV)	ES	S	T	TERMINAL HOUSING				CENTER OF GRAVITY	BEARINGS	
				AB	AC	AD	AE		UPPER END	LOWER END
449VP	3.50	0.625	0.625	31.10	21.00	6.00	1.20	22.6	7326B	6318C3

- NOTE: 1. DIMENSION AK TOLERANCE: +0.005 INCH, -0.000 INCH
 2. DIMENSION U TOLERANCE: +0.000 INCH, -0.001 INCH
 3. DIMENSION R TOLERANCE: +0.000 INCH, -0.015 INCH
 4. DIMENSION EU TOLERANCE: +0.000 INCH, -0.005 INCH
 5. DIMENSION AH TOLERANCE: +0.06 INCH, -0.06 INCH
 6. FACE RUNOUT AND PERMISSIBLE ECCENTRICITY OF MOUNTING RABBET 0.007 INCH INDICATOR READING
 7. PERMISSIBLE SHAFT RUNOUT 0.003 INCH INDICATOR READING
 8. USABLE SHAFT LENGTH FOR V