

高壓半密型WPI泵浦用馬達 (空心軸)

MODEL : AMRKNH

HIGH THRUST HOLLOWSHAFT PUMP MOTORS
MEDIUM VOLTAGE SQUIRREL CAGE
FRAME SIZE (SSV) 447TP ~ 449TP



DWG NO.

3A057M078E

REV. 01

		SPECIFICATION TABLE	MODEL
		HIGH THRUST HOLLOWSHAFT PUMP MOTORS MEDIUM VOLTAGE SQUIRREL CAGE	AMRKNH
ITEM		STANDARD SPECIFICATION	
RATING	KIND OF MOTOR	SQUIRREL-CAGE INDUCTION MOTOR (SCIM), VHS,ODP/WPI	
	DESIGN STANDARD	NEMA MG-1, PREMIUM EFFICIENCY	
	VOLTAGE	2300V / 4000V, 4160V	
	FREQUENCY	60HZ	
	OUTPUT RANGE	100 ~ 300HP	
	R.P.M. (SYN.)	1800 ~ 900R.P.M. (4 ~ 8 POLE)	
	TIME DUTY	CONTINUOUS S.F. 1.15 OR S.F. 1.0 (S1, MCR)	
	FRAME SIZE (SSV)	447TP ~ 449TP	
	PROTECTION ENCLOSURE	OPEN, DRIP PROOF (IP23), NEMA WEATHER-PROTECTED TYPE I(WPI)	
	COOLING METHOD	SELF VENTILATED, INTERIOR COOLING (IC 01)	
	MOUNTING	FLANGE MOUNTING (IM3011)	
HIGH THRUST LOAD	AS DWG NO. 3A057M080E		
APPLICATION	POWER CONDITION	VOLTAGE : $\pm 10\%$, FREQUENCY $\pm 5\%$, AND 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 : SHADOW, NON-HAZARDOUS AMBIENT TEMPERATURE : -15 ~ 40°C RELATIVE HUMIDITY : LESS THAN 80% 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	FULL VOLTAGE DIRECT-ON-LINE	
PERFORMANCE	TEST PROCEDURE	IEEE-112 METHOD B AND FULL VOLTAGE MEASUREMENT STARTING PERFORMANCE FOR MOTORS 300HP AND UNDER. IEEE-112 METHOD E-F AND REDUCED VOLTAGE MEASUREMENT STARTING PERFORMANCE FOR OTHERS	
	TYPICAL PERFORMANCE	AS DWG NO. 3A057M080	
	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	200HP AND SMALLER: 125% SYN. R.P.M. FOR TWO MINUTES (4P); 150% SYN. R.P.M. FOR TWO MINUTES (6P & 8P), 201HP AND LARGER: 125% SYN. R.P.M. FOR TWO MINUTES (4P AND SLOWER)	
	OVER TORQUE	160% RATED TORQUE FOR 15 SEC	

	PERFORMANCE DATA	MODEL AMRKNH
	HIGH THRUST HOLLOWSHAFT PUMP MOTORS MEDIUM VOLTAGE SQUIRREL CAGE	

NEMA Premium DP, NEMA, DESIGN B, CODE G, CLASS F, 40°C AMBIENT,
CONTINUOUS DUTY, 1.15 S.F. 2300V / 4000V, 4160V 60HZ
TYPICAL PERFORMANCE (2300V)

HP	FULL LOAD RPM	FRAME SIZE (SSV)	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 A	LOCKED ROTOR A	FULL LOAD lb-ft	LOCKED ROTOR %FLT	BREAK-DOWN %FLT					
			NOM.	MIN.	NOM.	NOM.	%	%	%	A	A	lb-ft	%FLT	%FLT					
100	1781	447TP	93.7	92.5	92.7	91.7	82.5	78.2	68.0	24	158	295	115	215	42	10100	444	2340	51
	1185	447TP	93.6	92.4	92.6	91.6	82.0	78.0	68.8	25	158	443	110	200	63	11300	608	2580	49
	889	447TP	93.2	92.0	92.2	91.2	74.9	68.3	55.4	27	158	591	110	200	87	12600	738	2660	48
125	1779	447TP	94.2	93.1	93.2	92.2	80.5	75.3	64.0	31	198	369	115	215	42	10100	444	2350	51
	1185	449TP	94.2	93.1	93.2	92.2	81.0	77.0	67.0	31	198	554	105	200	63	11300	661	2780	38
	890	449TP	93.3	92.1	92.3	91.3	77.0	71.4	59.3	33	198	738	115	210	101	12600	824	2910	37
150	1779	449TP	94.8	93.9	93.8	92.8	83.9	80.7	71.7	35	237	443	115	205	53	10100	515	2610	39
	1185	449TP	94.6	93.6	93.6	92.6	80.0	77.0	66.8	38	237	665	115	200	65	11300	686	2840	37
	888	449TP	93.4	92.2	92.4	91.4	75.7	70.2	59.3	40	237	888	110	185	106	12600	855	2970	36
200	1779	449TP	94.9	94.0	93.9	92.9	82.3	75.0	67.9	48	316	591	105	215	59	10100	544	2700	38
	1185	449TP	94.9	94.0	93.9	92.9	81.0	75.0	67.6	51	316	887	125	210	76	11300	720	2930	37
250	1777	449TP	95.0	94.1	94.0	93.0	82.2	77.6	67.3	60	395	738	110	215	62	10100	556	2720	38
	1184	449TP	95.0	94.1	94.0	93.0	80.0	76.0	66.0	63	395	1111	115	200	76	11300	745	2980	36
300	1775	449TP	95.0	94.1	94.0	93.0	83.8	80.2	72.0	71	474	888	100	200	67	10100	585	3030	38

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
447TP~449TP	0.0194

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

THRUST(%)	100	82	73	63	56	51
BEARING LIFE(Hrs.)	8800	15000	20000	30000	40000	50000

8. DATA SUBJECT TO CHANGE WITHOUT NOTICE
9. EFFICIENCY AT NO THRUST RUNNING

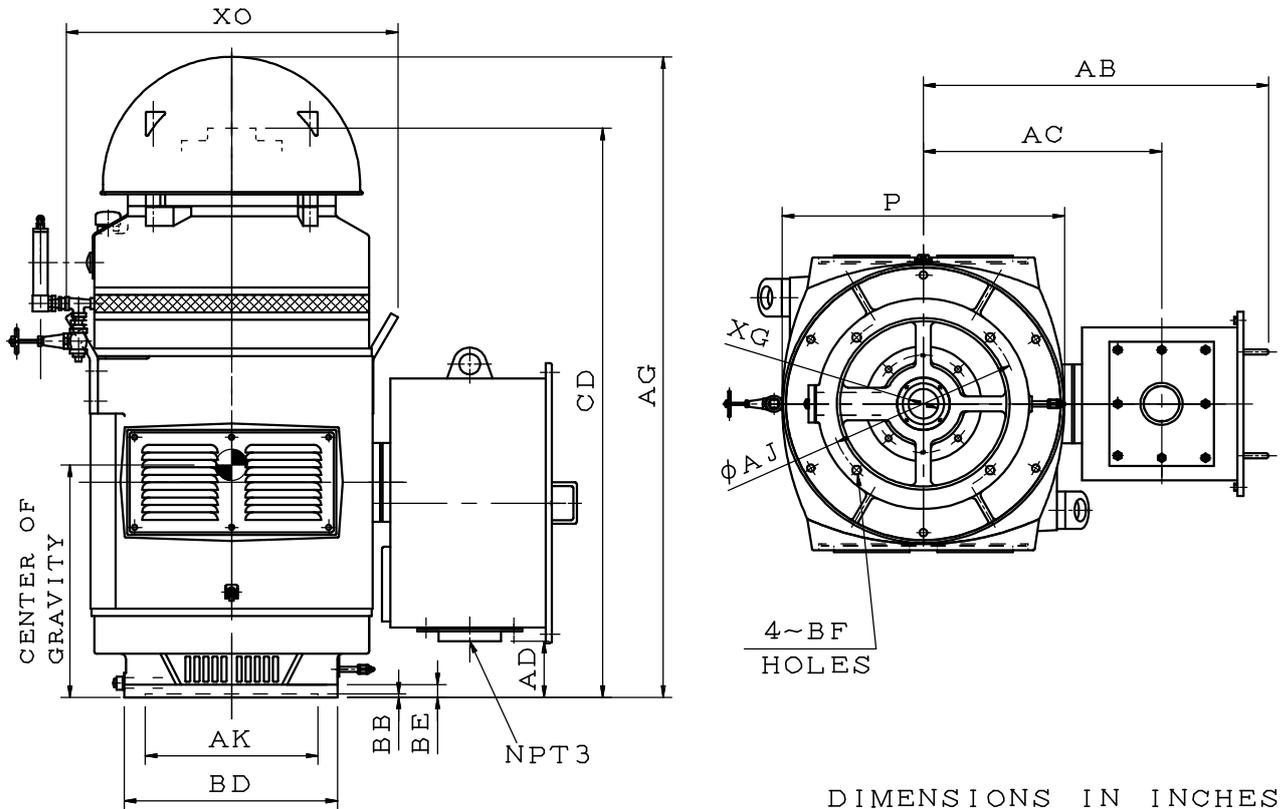
OUTLINE DIMENSIONS SHEET

MODEL

AMRKNH

HIGH THRUST HOLLOWSHAFT PUMP MOTORS
FRAME SIZE (SSV) 447TP ~ 449TP

DRIP PROOF SQUIRREL CAGE, NEMA WEATHER PROTECTED I



OUTPUT (HP)			FRAME SIZE (SSV)	MOUNTING						CD	CENTER OF GRAVITY
4P	6P	8P		AK	AJ	BD	BF	BB	BE		
100, 125	100	100	447TP	13.50	14.75	20.00	0.69	0.25	1.00	49.78	20.24
150, 200, 250, 300	125, 150, 200, 250, 300	125, 150	449TP	13.50	14.75	20.00	0.69	0.25	1.00	53.91	22.60

FRAME SIZE (SSV)	XG	AG	XO	P	TERMINAL HOUSING			BEARINGS	
					AB	AC	AD	UPPER END	LOWER END
447TP	2.559	55.80	27.55	24.00	31.10	21.00	3.64	7326B	6318C3
449TP	2.559	59.93	27.55	24.00	31.10	21.00	5.70	7326B	6318C3

- NOTE: 1. DIMENSION AK TOLERANCE: +0.005 INCH, -0.000 INCH
 2. FOR COUPLING AS DWG NO. 4B049R520E
 3. WITH BALL TYPE NON-REVERSE RATCHET MECHANISM
 4. ROTATING DIRECTION: COUNTER CLOCK-WISE
 (VIEW FROM COUPLING END)

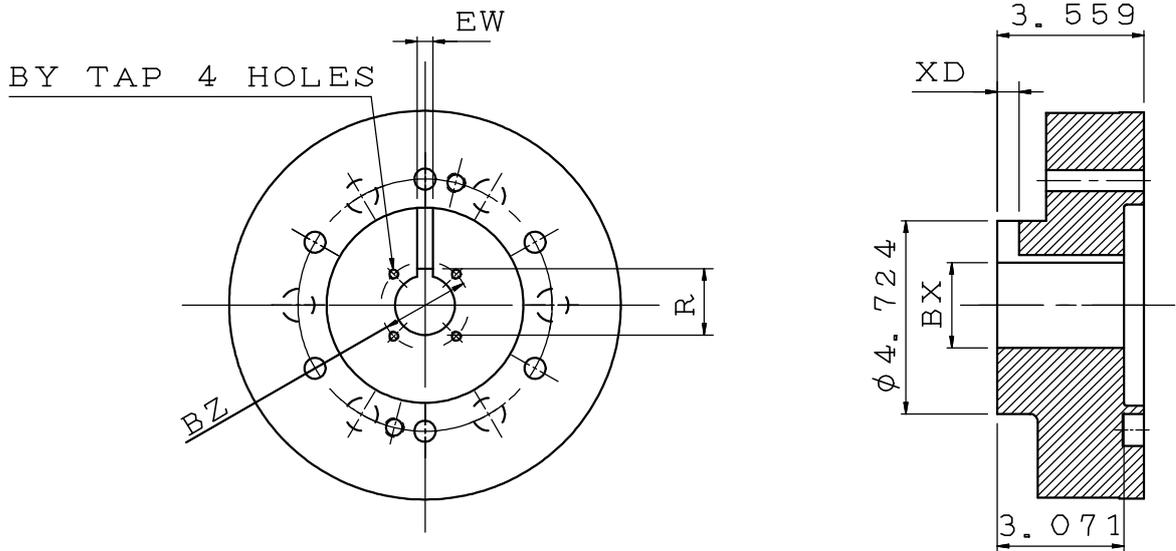
ISSUED
JUN. 06 2015

REVISED
SEP. 25 2015

OUTLINE DIMENSIONS SHEET

DRIVE COUPLING FOR HOLLOWSHAFT PUMP MOTOR
FRAME SIZE (SSV) 447TP ~ 449TP

MODEL
AMRKNH



DIMENSIONS IN INCHES

FRAME SIZE	BX	BY	BZ	EW	R	XD
447TP	1.688	1/4-20	2.500	0.375	1.859	0.531
449TP	1.938	1/4-20	2.500	0.500	2.160	0.689

NOTE: 1. TOLERANCE ON BX DIMENSION AS FOLLOWS UP TO 1.500 INCHES: +0.001INCH, -0.000INCH
LARGER THAN 1.500 INCHES: +0.0015INCH, -0.000INCH
2. DIMENSION EW TOLERANCE: +0.002INCH, -0.000INCH
3. DIMENSION R TOLERANCE: +0.010INCH, -0.000INCH

APPD.	C. LIU	SEP. 25 2015
CHKD.	R. LEE	SEP. 25 2015
DWN.	C. FU	SEP. 25 2015

TECO Electric & Machinery Co., Ltd.

DWG NO.
4B049R520E
REV.01

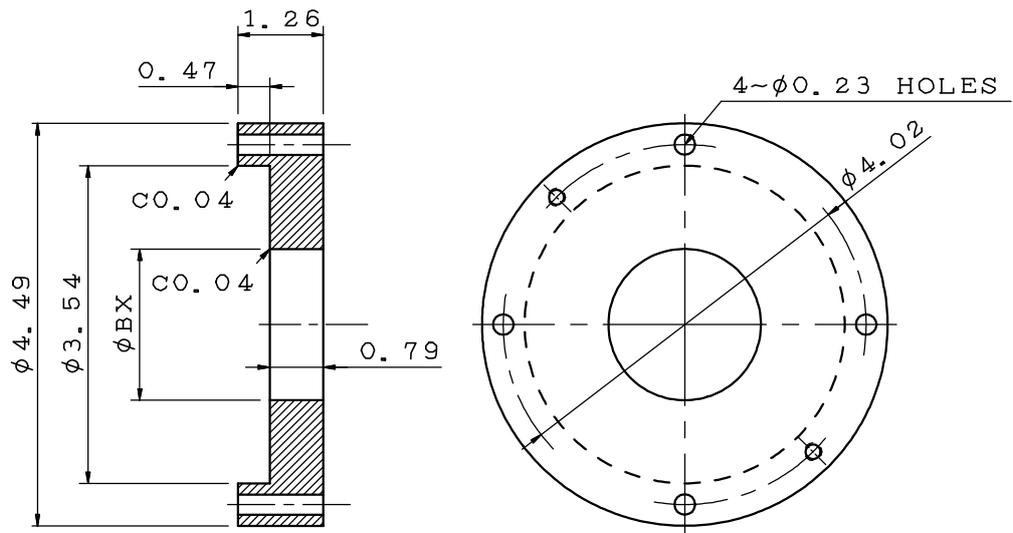
OUTLINE DIMENSIONS SHEET

MODEL

AMRKNH

STEADY BUSH FOR HOLLOW SHAFT PUMP MOTOR

FRAME SIZE (SSV) 447TP ~ 449TP



DIMENSIONS IN INCHES

FRAME SIZE	BX
447TP	1.688
449TP	1.938

NOTE: 1. TOLERANCE ON BX DIMENSION AS FOLLOWS UP TO 1.500 INCHES: +0.001INCH, -0.000INCH
LARGER THAN 1.500 INCHES: +0.0015INCH, -0.000INCH