低壓半密型WPI泵浦用馬達(空心軸)

MODEL : AMRCNH

HIGH THRUST HOLLOWSHAFT PUMP MOTORS
LOW VOLTAGE SQUIRREL CAGE
FRAME SIZE (SSV) 444TP ～ 449TP

DWG NO.
3A057H656E
REV. 04

SPECIFICATION TABLE

HIGH THRUST HOLLOWSHAFT PUMP MOTORS
LOW VOLTAGE SQUIRREL CAGE

MODEL **AMRCNH**

	ITEM	STANDARD SPECIFICATION
RATING	KIND OF MOTOR	SQUIRREL-CAGE INDUCTION MOTOR (SCIM), VHS, ODP/WPI
	DESIGN STANDARD	NEMA MG-1, PREMIUM EFFICIENCY
	VOLTAGE	230 / 460 V,460V,575V
	FREQUENCY	60HZ
	OUTPUT RANGE	100 ~ 400HP
	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)	444TP ~ 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. 3A057H658E
APPLICATION	POWER CONDITION	VOLTAGE : ±10%, FREQUENCY ±5%, AND 10% MAX. OF COMBINED VOLTAGE AND FREQUENCY,BUT FREQUENCY VARIATION DOES NOT EXCEED ±5%
	DESIGNED PRIMARILY	FOR DEEP WELL TURBINE PUMP
	ENVIRONMENT CONDITIONS	PLACE : SHADOW, NON-HAZARDOUS AMBIENT TEMPERATURE : -15 ~ 40℃ 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 OR P.W.S. OR VFD OR Y-Δ START
PERFORMANCE	TEST PROCEDURE	IEEE-112 METHOD-B AND FULL VOLTAGE MEASURING STARTING PERFORMANCE FOR MOTORS 300HP AND UNDER. IEEE-112 METHOD E-F AND REDUCED VOLTAGE MEASURING STARTING PERFORMANCE FOR THE OTHERS.
	TYPICAL PERFORMANCE	AS DWG NO. 3A057H658E
	TEMPERATURE RISE	NOT TO EXCEED 105℃ FOR S.F. 1.15 OR 80℃ 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 (6 & 8P) 201HP AND LARGER: 125% SYN. R.P.M. FOR TWO MINUTES (4P AND SLOWER)
	OVER TORQUE	160% RATED TORQUE FOR 15 SEC
	ACCESSORY	STEADY BUSH AS DWG NO. 4B049M680E

PERFORMANCE DATA

HIGH THRUST HOLLOWSHAFT PUMP MOTORS
LOW VOLTAGE SQUIRREL CAGE

MODEL **AMRCNH**

NEMA Premium™

DP, NEMA , DESIGN B , CODE G, CLASS F, 40℃ AMBIENT,
CONTINUOUS DUTY, 1.15 S.F. 230/460V 60HZ

TYPICAL PERFORMANCE (460V)

HP	FULL LOAD RPM	FRAME SIZE (SSV)	EFFICIENCY (%) FULL LOAD NOM.	FULL LOAD MIN.	3/4 LOAD NOM.	1/2 LOAD NOM.	POWER FACTOR FULL LOAD %	3/4 LOAD %	1/2 LOAD %	CURRENT FULL LOAD A	LOCKED ROTOR A	TORQUE FULL LOAD lb-ft	LOCKED ROTOR %FLT	BREAK-DOWN %FLT	ROTOR WR^2 lb-ft^2	DOWN THRUST LBS	APPROX. ROTOR WEIGHT LBS	APPROX. WEIGHT LBS	REED FREQ. HZ	DEFL. IN
100	1181	444TP	95.0	94.1	94.5	93.3	82.0	78.9	75.0	120	725	445	120	210	47	12000	410	1800	42	0.0055
	882	444TP	94.1	93.0	93.6	92.4	78.3	74.3	64.6	127	725	595	100	205	55	10700	480	1900	41	0.0058
125	1181	445TP	95.0	94.1	93.6	92.4	82.0	79.2	75.4	150	907.5	444	120	210	51	11900	460	1840	41.5	0.0057
	882	445TP	94.1	93.0	92.7	91.5	77.3	73.3	62.9	161	907.5	744	100	205	61	10600	520	1970	41	0.0058
150	1779	444TP	95.8	95.0	95.3	94.4	86.0	83.0	78.5	170	1085	443	120	210	46	10700	460	1830	42	0.0055
	1181	445TP	95.4	94.5	95.0	93.9	82.5	78.5	74.8	178	1085	667	120	205	58	11800	520	1970	40	0.0061
	886	447TP	94.1	93.0	93.7	92.6	77.0	73.0	62.9	194	1085	889	100	205	129	13300	740	3030	43	0.0053
200	1780	445TP	95.8	95.0	95.4	94.5	86.5	83.0	80.0	226	1450	590	120	205	57	10700	500	1980	41	0.0058
	1185	447TP	95.4	94.5	95.0	94.1	80.0	75.9	65.9	245	1450	889	118	205	119	14900	660	2730	45.5	0.0047
	888	449TP	94.1	93.0	93.7	92.8	78.0	73.0	62.0	255	1450	1183	100	205	190	10000	990	3360	34	0.0085
250	1780	445TP20	95.8	95.0	95.4	94.5	86.5	83.0	80.0	282	1825	737	120	205	65	13400	500	2440	47	0.0044
	1185	449TP	95.8	95.0	95.2	94.9	80.2	76.1	66.1	305	1825	1109	110	205	130	11300	820	3190	33	0.0089
300	1780	447TP	95.8	95.0	95.4	94.5	87.5	84.0	81.0	335	2200	884	120	205	73	13400	570	2670	46.5	0.0045
	1184	449TP	95.8	95.0	95.4	94.5	79.0	75.0	62.3	371	2200	1331	120	205	151	11200	890	3260	35	0.0080
350	1780	447TP	95.8	95.0	95.4	94.5	88.0	84.5	81.5	389	2550	1030	120	205	82	13300	630	2800	45	0.0048
400	1780	449TP	95.8	95.0	95.4	94.5	88.5	85.0	82.0	442	2900	1176	120	205	92	13200	710	3070	36	0.0075

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

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

3. DECLARED EFFICIENCY HAVEN`T TAKEN INTO ACCOUNT OF THRUST LOAD LOSSES

4. THRUST LOAD LOSSES ESTIMATED AS FOLLOWS：（ACCORDING TO NEMA STANDARD MG1-12.08）

FRAME SIZE	LOSS HP /100 RPM RPM/1000 LB THRUST
444TP - 445TP	0.0134
445TP20 - 447TP - 449TP	0.0145

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

THUST(%)	100	85	77	67	61	57
MIN. LIFE(Hrs)	8800	15000	20000	30000	40000	50000

6. DATA SUBJECT TO CHANGE WITHOUT NOTICE

7.ACCRODING TO NEMA MG 1-2003 (PART 20, PAGE13),
THE DEFLECTION(DEFL.) IS CALCULATED AS FOLLOWS:

$$\Delta_s = \frac{g}{(2\pi \cdot f_n)^2}$$

WHERE: g=1389600 in/min^2
fn=cycles per minute

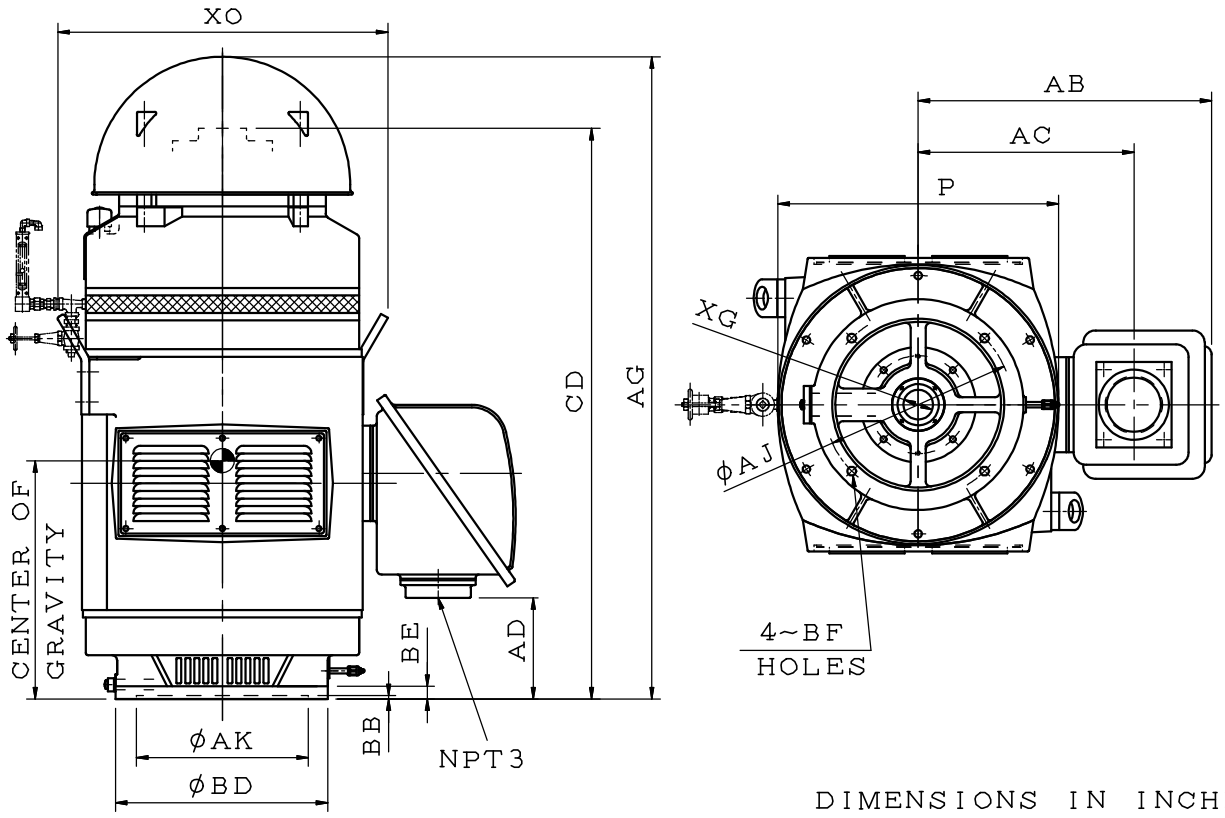
8. 230/460V UP TO 125HP, 150HP AND ABOVE, APPLY 460/(800)V ONLY

OUTLINE DIMENSIONS SHEET

HIGH THRUST HOLLOWSHAFT PUMP MOTORS
FRAME SIZE (SSV) 444TP ~ 449TP

MODEL
AMRCNH

DRIP PROOF SQUIRREL CAGE, NEMA WEATHER PROTECTED I



DIMENSIONS IN INCHES

OUTPUT(HP)			FRAME SIZE (SSV)	MOUNTING						CD
4P	6P	8P		AK	AJ	BD	BF	BB	BE	
150	100	100	444TP	13.50	14.75	16.50	0.69	0.25	1.00	44.78
200	125, 150	125	445TP	13.50	14.75	16.50	0.69	0.25	1.00	44.78
250	—	—	445TP20	13.50	14.75	20.00	0.69	0.25	1.00	44.78
300, 350	200, 250	150	447TP	13.50	14.75	20.00	0.69	0.25	1.00	49.78
400	300	200	449TP	13.50	14.75	20.00	0.69	0.25	1.00	53.91

FRAME SIZE (SSV)	XG	AG	XO	P	TERMINAL HOUSING			BEARINGS		CETER OF GRAVITY
					AB	AC	AD	UPPER END	LOWER END	
444TP	2.047	50.40	26.00	22.05	23.05	16.95	7.95	7324B	6316C3	17.91
445TP	2.047	50.40	26.00	22.05	23.05	16.95	7.95	7324B	6316C3	17.91
445TP20	2.559	50.80	27.55	24.00	24.00	17.90	6.65	7326B	6318C3	17.40
447TP	2.559	55.80	27.55	24.00	24.00	17.90	8.95	7326B	6318C3	20.24
449TP	2.559	59.93	27.55	24.00	24.00	17.90	11.05	7326B	6318C3	22.60

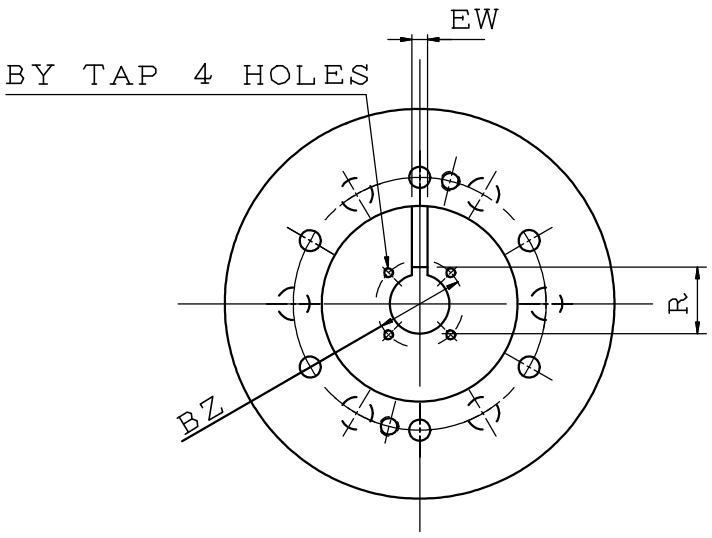
NOTE: 1. DIMENSION AK TOLERANCE: +0.005INCH, —0.000INCH
2. FOR COUPLING AS DWG NO. 4B049M679E
3. WITH BALL TYPE NON—REVERSE RATCHET MECHANISM
4. ROTATING DIRECTION: COUNTER CLOCK—WISE
(VIEW FROM COUPLING END)

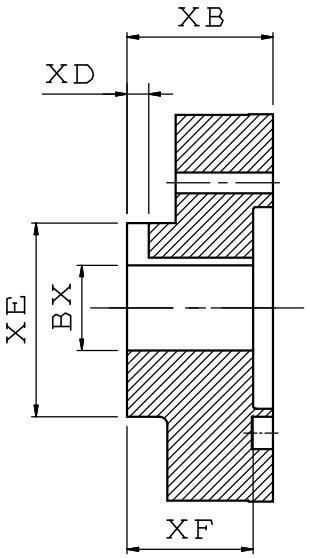
OUTLINE DIMENSIONS SHEET

DRIVE COUPLING FOR HOLLOWSHAFT PUMP MOTOR

FRAME SIZE (SSV) 444TP ~ 449TP

MODEL **AMRCNH**





DIMENSIONS IN INCHES

FRAME SIZE	BX	BY	BZ	EW	R	XB	XD	XE	XF
444TP 445TP	1.501	1/4—20	2.125	0.375	1.669	3.169	0.531	3.740	2.875
445TP20	1.501	1/4—20	2.125	0.375	1.669	3.559	0.531	4.724	3.071
447TP	1.688	1/4—20	2.500	0.375	1.859				
449TP	1.938	1/4—20	2.500	0.500	2.160	3.559	0.689	4.724	3.071

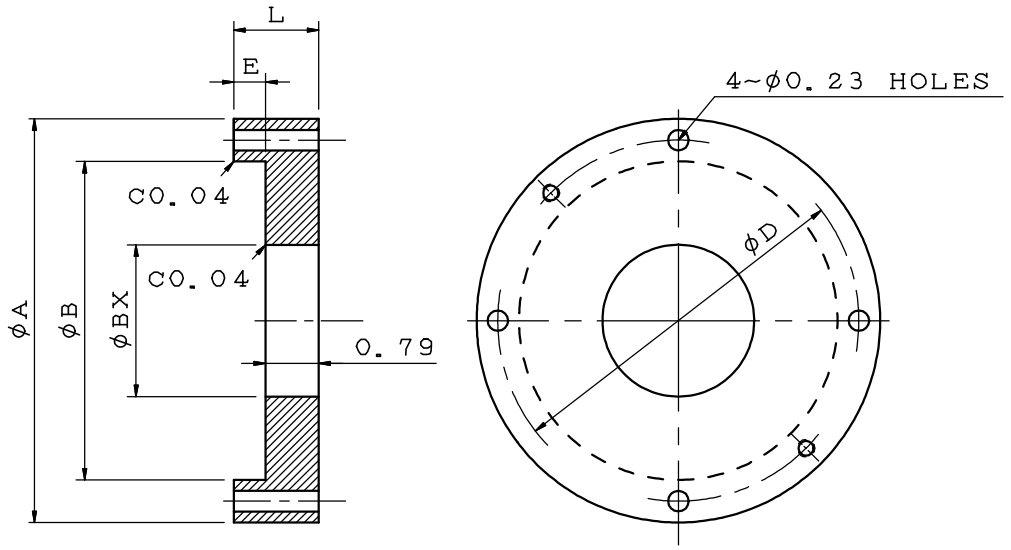
NOTE: 1. TOLERANCE ON BX DIMENSION AS FOLLOWS UP TO 1.500 INCHES: +0.001INCH, —0.000INCH
LARGER THAN 1.500 INCHES: +0.0015INCH, —0.000INCH
2. DIMENSION EW TOLERANCE: +0.002INCH, —0.000INCH
3. DIMENSION R TOLERANCE: +0.010INCH, —0.000INCH

OUTLINE DIMENSIONS SHEET

STEADY BUSH FOR HOLLOW SHAFT PUMP MOTOR

FRAME SIZE (SSV) 444TP ~ 449TP

MODEL **AMRCNH**



DIMENSIONS IN INCHES

FRAME SIZE	BX	A	B	D	E	L
444TP 445TP	1.501	4.09	3.15	3.62	0.31	1.10
445TP20	1.501	4.49	3.54	4.02	0.47	1.26
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