東元低壓Class I Division 1防爆馬達 (NEMA)

MODEL : AEUHXF

EXPLOSION PROOF MOTORS
LOW VOLTAGE SQUIRREL CAGE
FRAME SIZE (EX) : 143TC ~ 405TSC

DWG NO.
31057H10201
REV. 03

SPECIFICATION TABLE

3-PHASE INDUCTION MOTORS
LOW VOLTAGE SQUIRREL CAGE

MODEL
AEUHXF

ITEM		STANDARD SPECIFICATION
RATING	Kind of Motors	Squirrel Cage Induction Motors (SCIM)
	Design Standards	UL674 ; NEMA MG-1 , MG-13 ; CSA 22.2 No.145
	Voltages	230 / 460V (208V De - Rating Operation)
	Frequency	60Hz (Rated Sinusoidal or PWM Power Source)
	Output Range	1HP ~ 100HP
	R.P.M. (Syn.)	3600 ~ 900 R.P.M. (2 ~ 8 Poles)
	Time Duty	Continuous , S.F. 1.15 (SI , MCR)
	Frame Size (EX)	143TC ~ 405TSC
	Protection Enclosure	Totally Enclosed Fan Cooled , UL Explosion Proof , CSA22.2 No.145 .
	Cooling Method	Self External Fan , Surface Cooling (IC 411)
	Mounting	C - Face Mounted (IM 3601).
APPLICATION	Power Condition	Voltage : ±10% , Frequency : ±5% , and ±10% of Combined Voltage and Frequency , But Frequency Variation does not Exceed ±5%.
	Environment Conditions	Place : Shadow, Non - Hazardous. Ambient Temperature : -15℃~40℃ Relative Humidity : Less Than 90%RH (Non - Condensation). Altitude : Less Than 3,300ft
	Hazardous Location	Suitable For Division 1 , Class Ⅰ , Group D , Class Ⅱ , Group E. F. G.
	Drive Method	Belt Service, However, 2 Pole 25HP and Up Coupling Service only.
	Direction of Rotation	Bi - Directional
	Method of Starting	Full Voltage Direct On Line
PERFORMANCE	Test Procedure for Explosion Proof	According to UL674.
	Test Procedure	IEEE - 112 Method B and Full Voltage Measuring Starting Performance.
	Temperature Rise	Not to Exceed 90℃ for S.F.1.15 (B class) by Resistance Method.
	External Surface Temperature	Comply with Operating Temperature Code T3B for Class Ⅰ Group D, Class Ⅱ Group E,F,G of Table 37.1 of UL674, Limited by Built in Normal Close Thermostat, One Per Phase.
	Over Speed	125% Syn. R.P.M. for 2 Minutes. (2,4 Poles) 150% Syn. R.P.M. for 2 Minutes. (the others)
	Over Torque	160% Rated Torque for 15 Sec.

Inverter Duty Frequency Range

Certification List	Frame	HZ Range			
		VT	CT	CHP	Temp. code
CSA Certification	143T~184T	3~60	12~60	60~90	T3B (165℃)
	213T~215T	3~60	6~60	60~90	
	254T~326T	3~60	6~60	60~90	
	364T~405T	3~60	6~60	60~90	
UL Certification	143T~215T	3~60	10~60	60~90	T3B (165℃)
	254T~326T	3~60	13~60	60~90	
	364T~405T	3~60	16~60	60~90	

ISSUED	PERFORMANCE DATA	MODEL
20-Nov-00	3-PHASE SQUIRREL CAGE	AEUHXF
REVISED	PREMIUM EFFICIENCY INDUCTION MOTORS	
27-Sep-17		

CC002A

CSA EEV 78277 EEF. VALUES ON NAMEPLATE ARE AT 100% FULL LOAD

TEFC , NEMA , T-FRAME , DESIGN - B or C ,
CLASS F , 40℃ AMBIENT , CONTINUOUS DUTY ,
S.F. 1.15, 230/460V 60HZ

NEMA Premium

TYPICAL PERFORMANCE (230 V)

HP	FULL LOAD RPM	FRAME NO.	EFFICIENCY FULL LOAD NOM.	EFFICIENCY FULL LOAD MIN.	EFFICIENCY 3/4 LOAD NOM.	EFFICIENCY 1/2 LOAD NOM.	POWER FACTOR FULL LOAD (%)	POWER FACTOR 3/4 LOAD (%)	POWER FACTOR 1/2 LOAD (%)	CURRENT FULL LOAD (A)	CURRENT LOCKED ROTOR (A)	TORQUE FULL LOAD lb-ft	TORQUE LOCKED ROTOR %FLT	TORQUE PULL UP %FLT	TORQUE BREAK DOWN %FLT	ROTOR WK^2 lb-ft^2	NEMA CODE LETTER	APPROX. WEIGHT LBS
1	1755	143T	85.5	82.5	84.0	80.5	68.0	58.5	45.0	3.22	30	2.992	350	325	450	0.075	N	66
	1145	145T	82.5	80.0	82.0	79.5	66.0	57.0	45.0	3.44	30	4.668	250	235	305	0.122	N	77
	860	182T	77.0	74.0	75.5	70.0	58.5	49.5	38.0	4.16	30	6.215	200	130	260	0.239	N	83
1.5	3505	143T	84.0	81.5	84.0	81.0	84.0	77.0	64.5	3.98	40	2.247	310	255	395	0.052	M	70
	1740	145T	86.5	84.0	87.0	85.5	75.5	67.0	53.5	4.30	40	4.526	300	305	375	0.103	M	75
	1170	182T	87.5	85.5	87.0	83.5	63.0	54.0	42.0	5.10	40	6.731	230	225	370	0.313	M	114
	860	184T	78.5	75.5	75.5	70.0	60.5	51.5	39.5	5.91	40	9.322	185	130	250	0.275	M	118
2	3490	145T	85.5	82.5	86.0	84.5	87.0	81.5	71.0	5.03	50	3.009	280	225	360	0.064	L	75
	1740	145T	86.5	84.0	87.0	86.0	78.0	70.5	57.0	5.55	50	6.035	280	255	350	0.108	L	77
	1165	184T	88.5	86.5	89.0	87.0	69.0	62.0	50.0	6.13	50	9.014	180	150	275	0.423	L	130
	865	213T	84.0	81.5	84.0	82.5	64.0	55.0	42.5	6.97	50	12.36	225	200	275	0.586	L	167
3	3505	182T	87.5	85.5	88.5	87.0	90.0	87.0	79.5	7.13	64	4.494	295	245	340	0.190	K	112
	1755	182T	89.5	87.5	90.0	89.5	81.0	75.0	63.5	7.75	64	8.975	255	230	345	0.312	K	114
	1170	213T	89.5	87.5	90.0	88.0	80.0	73.5	61.0	7.85	64	13.46	200	155	315	0.836	K	187
	865	215T	85.5	82.5	84.0	82.5	66.0	57.0	44.5	9.96	64	18.54	240	230	305	0.821	K	191
5	3490	184T	88.5	86.5	90.0	90.0	91.0	89.5	83.5	11.6	92	7.522	260	210	305	0.249	J	126
	1745	184T	89.5	87.5	91.0	91.0	84.0	80.0	70.0	12.5	92	15.04	205	185	285	0.422	J	130
	1170	215T	90.2	88.5	90.5	90.0	81.0	76.0	65.5	12.8	92	22.44	190	140	280	1.122	J	220
	870	254T	86.5	84.0	86.5	85.5	72.0	64.0	51.5	15.0	92	30.72	190	185	240	1.660	J	310
7.5	3535	213T	89.5	87.5	90.0	89.5	87.0	84.0	76.0	18.0	127	11.14	245	230	305	0.412	H	189
	1760	213T	91.7	90.2	92.0	91.0	86.5	83.0	75.0	17.7	127	22.37	280	230	310	0.731	H	191
	1170	254T	91.0	89.5	91.5	91.0	82.0	77.0	66.5	18.8	127	33.66	240	195	260	2.158	H	323
	865	256T	86.5	84.0	85.5	84.0	71.5	63.5	50.0	22.7	127	46.34	200	190	240	2.042	H	382
10	3515	215T	90.2	88.5	91.0	90.5	87.0	85.0	79.0	23.9	162	14.94	205	165	260	0.511	H	218
	1750	215T	91.7	90.2	92.0	92.0	87.5	85.0	78.5	23.3	162	30.00	260	210	280	0.924	H	220
	1170	256T	91.0	89.5	92.0	91.0	81.5	76.5	65.0	25.2	162	44.88	260	210	280	2.872	H	392
	885	284T	89.5	87.5	89.5	87.5	73.5	66.0	53.5	28.5	162	60.39	235	210	280	5.421	H	482
15	3530	254T	91.0	89.5	91.5	90.5	92.0	91.0	87.0	33.6	232	22.31	235	185	285	1.088	G	348
	1770	254T	92.4	91.0	92.5	92.0	85.0	82.0	73.0	35.8	232	44.50	200	145	275	2.179	G	354
	1180	284T	91.7	90.2	92.0	91.5	83.0	79.5	70.5	36.9	232	66.74	250	190	250	6.824	G	506
	880	286T	89.5	87.5	90.2	90.2	78.0	73.0	62.0	40.2	232	91.11	180	170	225	7.961	G	511
20	3520	256T	91.0	89.5	92.0	92.0	92.0	91.5	88.0	44.7	290	29.83	230	180	260	1.407	G	383
	1765	256T	93.0	91.7	93.0	93.0	85.5	83.0	75.5	47.1	290	59.50	200	135	255	2.741	G	398
	1170	286T	91.7	90.2	93.0	93.0	84.0	81.0	74.0	48.6	290	89.75	210	175	220	7.961	G	554
	875	324T	90.2	88.5	91.0	91.0	81.0	76.0	67.0	51.3	290	122.2	200	170	210	10.39	G	738
25	3540	284TS	91.7	90.2	93.0	92.0	92.0	91.0	87.0	55.5	365	37.08	210	150	250	1.735	G	484
	1775	284T	93.6	92.4	94.0	93.5	85.0	83.0	77.0	58.8	365	73.95	200	135	220	4.425	G	521
	1175	324T	93.0	91.7	93.0	93.0	83.0	80.5	73.0	60.6	365	111.7	210	170	225	10.89	G	722
	875	326T	90.2	88.5	91.0	91.0	79.5	76.0	66.5	65.3	365	152.7	200	175	220	12.37	G	838
30	3530	286TS	92.4	91.0	93.0	93.0	92.0	91.5	88.0	66.1	435	44.62	195	140	230	1.959	G	517
	1775	286T	93.6	92.4	94.0	93.5	85.5	83.5	76.5	70.2	435	88.74	190	145	230	5.044	G	552
	1180	326T	93.0	91.7	94.0	93.5	83.0	80.0	72.5	72.8	435	133.5	220	185	240	12.37	G	781
	885	364T	91.7	90.2	92.4	91.7	77.5	72.0	62.0	79.0	435	181.2	200	170	200	17.94	G	962
40	3550	324TS	93.0	91.7	93.5	93.0	91.0	91.0	88.0	88.5	580	59.16	175	110	240	3.590	G	704
	1775	324T	94.1	93.0	94.0	94.0	85.5	84.0	79.0	93.1	580	118.3	225	180	215	8.624	G	719
	1180	364T	94.1	93.0	94.0	93.0	86.0	83.5	76.0	92.6	580	178.0	220	190	220	17.94	G	990
	885	365T	91.7	90.2	92.4	91.7	76.5	72.0	61.0	107	580	241.6	200	150	200	19.32	G	1002
50	3550	326TS	93.6	92.4	94.0	94.0	91.0	91.0	89.0	110	725	73.95	185	115	240	4.488	G	788
	1775	326T	94.5	93.6	95.0	95.0	85.5	84.5	79.0	116	725	147.9	240	185	210	10.12	G	792
	1180	365T	94.1	93.0	94.0	93.0	83.5	79.5	70.0	119	725	222.5	235	175	235	20.01	G	1019
	885	404T	93.0	91.7	93.6	93.0	80.5	77.0	67.5	125	725	302.0	200	175	230	31.47	G	1350
60	3555	364TS	93.6	92.4	94.0	94.0	93.0	92.0	89.5	129	870	88.62	145	115	290	7.380	G	950
	1775	364T	95.0	94.1	95.5	95.0	88.0	86.0	80.5	134	870	177.5	200	170	245	11.74	G	964
	1180	404T	94.5	93.6	95.0	95.0	86.0	83.0	76.0	138	870	267.0	220	180	240	28.13	G	1285
	885	405T	93.0	91.7	93.6	93.6	81.0	78.5	70.0	149	870	362.4	200	175	230	32.55	G	1392
75	3555	365TS	93.6	92.4	94.0	93.5	93.0	92.5	90.5	161	1085	110.8	145	120	295	9.057	G	1014
	1780	365T	95.4	94.5	95.5	95.5	88.0	86.0	80.0	167	1085	221.2	215	175	250	14.67	G	1049
	1180	405T	94.5	93.6	95.0	95.0	86.5	85.0	79.0	172	1085	333.7	185	155	220	32.453	G	1372
100	3565	405TS	94.5	93.6	95.0	95.0	92.0	91.5	88.5	215	1450	147.3	155	125	275	10.77	G	1350
	1780	405T	95.4	94.5	95.5	95.5	90.0	89.0	84.0	218	1450	295.0	200	170	240	25.78	G	1396

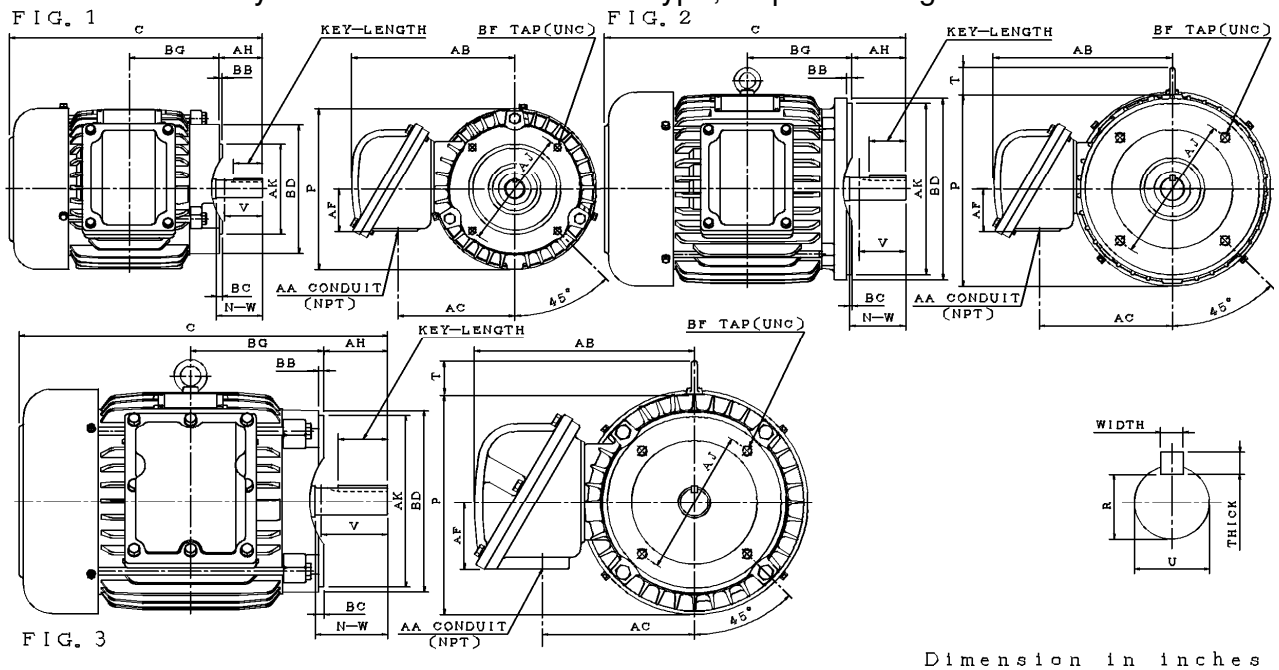
NOTE : 1. The above are typical values based on test according to ANSI／IEEE standard 112 method B.
2. Breakdown & locked rotor torques are shown as average expected values.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Tolerance According to NEMA MG1-12 & IEC 60034-1.
5. Data subject to change without notice.

OUTLINE DIMENSIONS SHEET

MODEL **AEUHXF**

EXPLOSION PROOF MOTORS
FRAME SIZE(EX) 143TC ~ 215TC

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.



Dimension in inches

Output (HP)				FRAME	FIG.	C	P	T	AH	AJ	AK	BB	BC	BD	BF	
2P	4P	6P	8P	SIZE	NO.										No.	Size
1.5	1	0.75	—	143TC	1	12.56	8.00	—	2.12	5.875	4.5	0.16	0.13	6.4	4	3/8-16
2	1.5 2	1	—	145TC		13.54	8.00	—	2.12	5.875	4.5	0.16	0.13	6.4	4	3/8-16
3	3	1.5	1	182TC	2	14.89	9.60	1.30	2.62	7.250	8.5	0.25	0.13	9.0	4	1/2-13
5	5	2	1.5	184TC		15.91	9.60	1.30	2.62	7.250	8.5	0.25	0.13	9.0	4	1/2-13
7.5	7.5	3	2	213TC	3	18.26	11.10	1.65	3.12	7.250	8.5	0.25	0.26	9.0	4	1/2-13
10	10	5	3	215TC		19.76	11.10	1.65	3.12	7.250	8.5	0.25	0.26	9.0	4	1/2-13

FRAME SIZE	Keyseat	Key			Shaft Extension			BG	Terminal Housing				Bearings	
	R	WIDTH	THICK	LENGTH	N-W	U	V		AA	AB	AC	AF	DRIVE END	OPPOSITE DRIVE END
143TC	0.771	0.188	0.188	1.41	2.25	0.875	2.20	4.39	3/4	8.03	5.71	2.11	6205ZZ	6205ZZ
145TC	0.771	0.188	0.188	1.41	2.25	0.875	2.20	4.88	3/4	8.03	5.71	2.11	6205ZZ	6205ZZ
182TC	0.986	0.250	0.250	1.78	2.75	1.125	2.70	5.12	3/4	8.78	6.45	2.11	6306ZZ	6306ZZ
184TC	0.986	0.250	0.250	1.78	2.75	1.125	2.70	5.63	3/4	8.78	6.45	2.11	6306ZZ	6306ZZ
213TC	1.201	0.312	0.312	2.41	3.38	1.375	3.30	6.51	1	10.73	7.45	2.31	6308ZZ	6306ZZ
215TC	1.201	0.312	0.312	2.41	3.38	1.375	3.30	7.26	1	10.73	7.45	2.31	6308ZZ	6306ZZ

Note :

1. Dimension AK tolerance : +0.000 inches, -0.003 inches.
2. Dimension U tolerance : +0.000 inches, -0.0005 inches.
3. Dimension R tolerance : +0.000 inches, -0.015 inches.
4. Dimension V is the length of straight part of shaft.

OUTLINE DIMENSIONS SHEET

MODEL **AEUHXF**

EXPLOSION PROOF MOTORS
FRAME SIZE. 254TC~405TSC

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.

FIG. 4

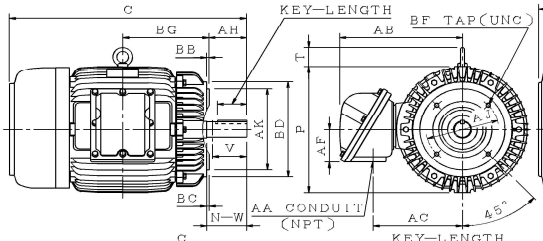


FIG. 5

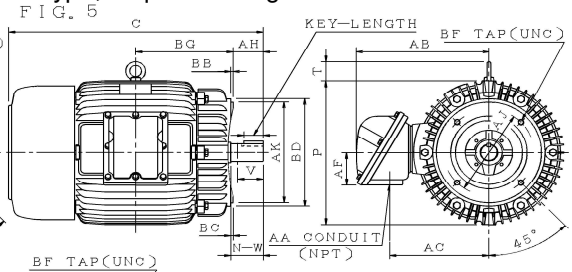
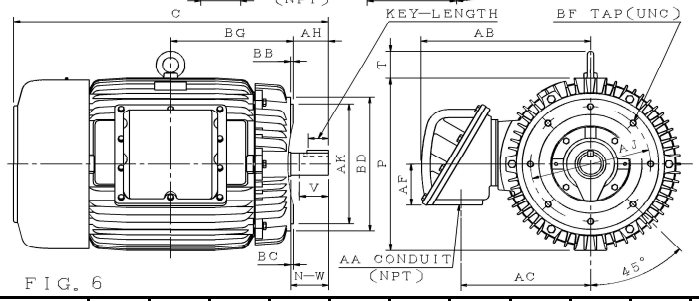
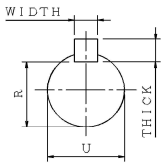


FIG. 6





Dimension in inches

Output (HP)				FRAME	FIG.	C	P	T	AH	AJ	AK	BB	BC	BF		Key			Shaft Extension		
2P	4P	6P	8P	SIZE	NO.									No.	Size	WIDTH	THICK	LENGTH	N-W	U	V
15	15	7.5	5	254TC		23.78	13.15	2.00	3.75	7.250	8.5	0.25	0.25	4	1/2-13	0.375	0.375	2.910	4.00	1.625	3.90
20	20	10	7.5	256TC	4	25.52	13.15	2.00	3.75	7.250	8.5	0.25	0.25	4	1/2-13	0.375	0.375	2.910	4.00	1.625	3.90
—	25	15	10	284TC		26.80	15.04	2.00	4.37	9.000	10.5	0.25	0.25	4	1/2-13	0.500	0.500	3.270	4.62	1.875	4.50
25	—	—	—	284TSC	5	25.43	15.04	2.00	3.00	9.000	10.5	0.25	0.25	4	1/2-13	0.375	0.375	1.930	3.25	1.625	3.20
—	30	20	15	286TC	4	28.30	15.04	2.00	4.37	9.000	10.5	0.25	0.25	4	1/2-13	0.500	0.500	3.270	4.62	1.875	4.50
30	—	—	—	286TSC		26.93	15.04	2.00	3.00	9.000	10.5	0.25	0.25	4	1/2-13	0.375	0.375	1.930	3.25	1.625	3.20
—	40	25	20	324TC		29.93	16.54	2.35	5.00	11.000	12.5	0.25	0.25	4	5/8-11	0.500	0.500	3.910	5.25	2.125	5.15
40	—	—	—	324TSC	5	28.43	16.54	2.35	3.50	11.000	12.5	0.25	0.25	4	5/8-11	0.50	0.50	2.010	3.75	1.875	3.65
—	50	30	25	326TC		31.42	16.54	2.35	5.00	11.000	12.5	0.25	0.25	4	5/8-11	0.500	0.500	3.910	5.25	2.125	5.15
50	—	—	—	326TSC		29.92	16.54	2.35	3.50	11.000	12.5	0.25	0.25	4	5/8-11	0.50	0.50	2.010	3.75	1.875	3.65
—	60	40	30	364TC		33.55	18.04	2.80	5.63	11.000	12.5	0.25	0.25	8	5/8-11	0.625	0.625	4.280	5.88	2.375	5.75
60	—	—	—	364TSC		31.42	18.04	2.80	3.50	11.000	12.5	0.25	0.25	8	5/8-11	0.500	0.500	2.010	3.75	1.875	3.65
—	75	50	40	365TC		33.55	18.04	2.80	5.63	11.000	12.5	0.25	0.25	8	5/8-11	0.625	0.625	4.280	5.88	2.375	5.75
75	—	—	—	365TSC	6	31.42	18.04	2.80	3.50	11.000	12.5	0.25	0.25	8	5/8-11	0.500	0.500	2.010	3.75	1.875	3.65
—	—	60	50	404TC		36.69	20.08	3.54	7.00	11.000	12.5	0.25	0.25	8	5/8-11	0.750	0.750	5.650	7.25	2.875	7.15
—	100	75	60	405TC		38.19	20.08	3.54	7.00	11.000	12.5	0.25	0.25	8	5/8-11	0.750	0.750	5.650	7.25	2.875	7.15
100	—	—	—	405TSC		35.19	20.08	3.54	4.00	11.000	12.5	0.25	0.25	8	5/8-11	0.500	0.500	2.780	4.25	2.125	4.15

FRAME SIZE	BD	BG	Keyseat R	Terminal Housing AA	AB	AC	AF	Bearings DRIVE END	OPPOSITE DRIVE END
254TC	9.92	8.63	1.416	1 1/4	12.24	8.95	3.43	6309ZZ	6307ZZ
256TC	9.92	9.50	1.416	1 1/4	12.24	8.95	3.43	6309ZZ	6307ZZ
284TC	11.22	9.75	1.591	1 1/2	13.23	9.92	3.43	6311ZZ	6310ZZ
284TSC	11.22	9.75	1.416	1 1/2	13.23	9.92	3.43	6211C3	6211C3
286TC	11.22	10.50	1.591	1 1/2	13.23	9.92	3.43	6311ZZ	6310ZZ
286TSC	11.22	10.50	1.416	1 1/2	13.23	9.92	3.43	6211C3	6211C3
324TC	13.59	10.75	1.845	2	16.17	12.17	4.70	6312	6212
324TSC	13.59	10.75	1.591	2	16.17	12.17	4.70	6312C3	6212C3
326TC	13.59	11.50	1.845	2	16.17	12.17	4.70	6312	6212
326TSC	13.59	11.50	1.591	2	16.17	12.17	4.70	6312C3	6212C3
364TC	13.98	12.25	2.021	3	16.97	12.95	4.31	6313	6213
364TSC	13.98	12.25	1.591	3	16.97	12.95	4.31	6312C3	6212C3
365TC	13.98	12.25	2.201	3	16.97	12.95	5.87	6313	6213
365TSC	13.98	12.25	1.591	3	16.97	12.95	5.87	6312C3	6212C3
404TC	13.98	13.75	2.450	3	20.47	15.43	5.67	6317	6313
405TC	13.98	13.75	2.450	3	20.47	15.43	5.67	6317	6313
405TSC	13.98	13.75	1.845	3	20.47	15.43	5.67	6313C3	6313C3

Note :

1. Dimension AK tolerance :
   On Frames 254TC ~ 286TSC +0.000 inches , -0.003 inches.
   On Frames 324TC ~ 365TSC +0.000 inches , -0.005 inches.
2. Dimension U tolerance : +0.000 inches, -0.001 inches.
3. Dimension R tolerance : +0.000 inches, -0.015 inches.
4. Dimension V is the length of straight part of shaft.