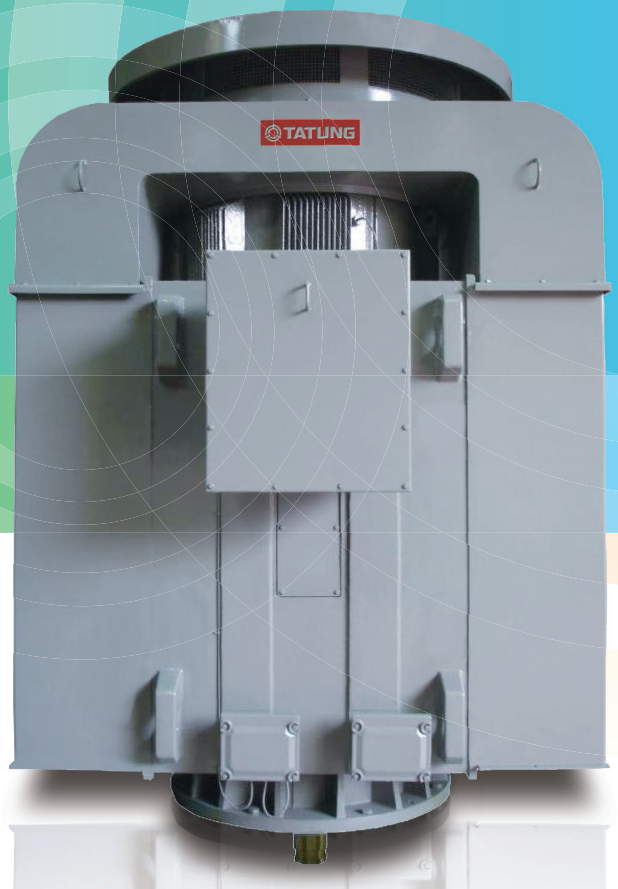
TATUNG

Squirrel Cage 3-Phase Induction Motor

TW21TNV SERIES (Standard & High Thrust)

Vertical Flange - Mounted
3-Phase / 60Hz / 2300V, 4160V, 6600V, 11000V
Frame Size N3511V — N5014V (IMPERIAL)
TEAAC / WPI / WPII CONSTRUCTION

NEMA STANDARD



ISO 9001 BUREAU VERITAS Certification

STANDARD SPECIFICATIONS

Output	:	400HP (300kW)~3000HP (2250kW)
Poles	:	4P~8P
Frame size	:	N3511V ~ N5014V (IMPERIAL)
Voltage	:	2300V, 4160V, 6600V, 11000V
Frequency	:	60Hz
Enclosure	:	Totally Enclosed Air to Air Cooled (TEAAC) Weather - Protected Type I and Type II
Mounting	:	Vertical Flange - Mounted ("P" base)
Insulation	:	Class F
Temperature rise	:	Class B at S.F. 1.0 / Class F at S.F. 1.15 (By Resistance Method)
Environment	:	Ambient Temperature 40°C
Altitude	:	3300 feet (1000 meters) or less
Thrust capability	:	Thrust load is not allowed for standard motors. For high thrust motors,maximum allowable down thrust is based on 5 years L-10 bearing life.

PREMIUM FEATURES

Optimized Cast Iron Frame
Optimum cast iron design ensures low vibration and noise.

Reliable Copper Bar Rotor Construction
Compact design and precise balancing provide reliable operation. Improved arrangement of ventilation path inside rotor greatly raises cooling efficiency.

Durable Bearing Construction
Advanced upper finned bracket design improves heat dissipation of thrust bearing. Proper bearing selection and bearing life calculation ensures lasting operation especially for high thrust condition. Extra high thrust and long bearing life is available on request.

Large Size Terminal Box
Large size steel plate terminal box provides ample space and tough enclosure for cable connection.

V.P.I. Stator Winding
For medium and high voltage motors, stator winding with global V.P.I. treatment meets class F insulation and gives high resistance to corona.

Optimized Ventilation Design
Optimum heat exchanger and ventilator design ensures to meet NEMA enclosure type TEAAC\WPI\WPII, Improved arrangement of cooler-pipe and ventilation path greatly raises cooling efficiency.

Low Noise Construction
Noise level meets or exceeds NEMA MG 1 standard. Lower noise is available on request.

TATUNG

MEDIUM VOLTAGE VERTICAL MOTOR
TEAAC Type, Squirrel Cage
3 Phase , 60Hz 2300V, S.F. 1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
500	880	N3511V	130	715	2986	80	200	94.0	93.5	92.5	76.5	73.0	64.0	15465
600	1180	N3511V	146	875	2672	80	200	94.0	93.5	92.5	82.0	80.0	71.0	13966
	880	N3511V	155	850	3583	80	200	94.0	93.5	92.5	77.0	73.5	64.5	15465
700	1775	N3511V	160	1040	2073	80	200	94.5	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	169	1010	3118	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	178	975	4181	80	200	94.5	94.0	93.0	78.0	74.5	65.5	18122
800	1775	N3511V	182	1180	2369	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	191	1140	3563	80	200	95.0	94.5	93.5	82.5	80.5	71.5	13966
	882	N4012V	196	1070	4767	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
900	1775	N3511V	205	1330	2665	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	212	1270	4008	80	200	95.0	94.5	93.5	83.5	80.5	74.5	16292
	882	N4012V	220	1210	5363	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
1000	1775	N3511V	228	1480	2961	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	232	1390	4454	80	200	95.5	95.0	93.5	84.5	82.5	76.5	16292
	882	N4514V	242	1330	5959	80	200	95.5	95.0	93.5	81.0	76.0	68.0	29894
1250	1775	N4012V	279	1810	3701	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	287	1720	5567	80	200	95.5	95.0	93.5	85.5	83.5	78.0	16292
	882	N4514V	295	1620	7448	80	200	95.5	95.0	93.5	83.0	81.0	72.0	29894
1350	1775	N4012V	301	1950	3997	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4514V	308	1840	6013	80	200	95.5	95.0	94.0	86.0	85.0	81.0	27095
	885	N4514V	319	1750	8017	80	200	95.5	95.0	93.5	83.0	81.5	72.0	29224
1500	1775	N4012V	332	2160	4441	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	340	2040	6681	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	352	1930	8908	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
1750	1780	N4012V	388	2520	5167	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	397	2380	7794	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	411	2260	10392	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
2000	1780	N4514V	438	2840	5905	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	448	2690	8908	80	200	96.0	95.5	94.5	87.0	86.0	82.0	27095
	885	N5014V	462	2540	11877	80	200	96.0	95.5	94.5	84.5	83.0	74.0	29244
2250	1780	N4514V	488	3170	6643	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	502	3010	9979	80	200	96.0	95.5	94.5	87.5	86.5	82.5	26444
	885	N5014V	516	2840	13362	80	200	96.0	95.5	94.5	85.0	83.5	74.5	29244
2500	1780	N4514V	536	3480	7381	80	200	96.5	96.0	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	551	3300	11088	80	200	96.5	96.0	95.0	88.0	87.0	83.0	26444

Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.

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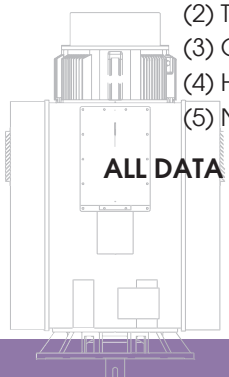

TATUNG

MEDIUM VOLTAGE VERTICAL MOTOR
TEAAC Type, Squirrel Cage
3 Phase , 60Hz 4160V, S.F. 1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
500	880	N3511V	72	395	2986	80	200	94.0	93.5	92.5	76.5	73.0	64.0	15465
600	1180	N3511V	81	485	2672	80	200	94.0	93.5	92.5	82.0	80.0	71.0	13966
	880	N3511V	86	470	3583	80	200	94.0	93.5	92.5	77.0	73.5	64.5	15465
700	1775	N3511V	89	575	2073	80	200	94.5	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	94	560	3118	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	98	540	4181	80	200	94.5	94.0	93.0	78.0	74.5	65.5	18122
800	1775	N3511V	101	655	2369	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	106	630	3563	80	200	95.0	94.5	93.5	82.5	80.5	71.5	13966
	882	N4012V	108	595	4767	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
900	1775	N3511V	113	735	2665	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	117	705	4008	80	200	95.0	94.5	93.5	83.5	80.5	74.5	16292
	882	N4012V	122	670	5363	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
1000	1775	N3511V	126	820	2961	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	128	770	4454	80	200	95.5	95.0	93.5	84.5	82.5	76.5	16292
	882	N4514V	134	735	5959	80	200	95.5	95.0	93.5	81.0	76.0	68.0	29894
1250	1775	N4012V	154	1000	3701	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	159	950	5567	80	200	95.5	95.0	93.5	85.5	83.5	78.0	16292
	882	N4514V	163	895	7448	80	200	95.5	95.0	93.5	83.0	81.0	72.0	29894
1350	1775	N4012V	166	1080	3997	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4514V	170	1020	6013	80	200	95.5	95.0	94.0	86.0	85.0	81.0	27095
	885	N4514V	176	970	8017	80	200	95.5	95.0	93.5	83.0	81.5	72.0	29894
1500	1775	N4012V	184	1190	4441	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	188	1120	6681	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	195	1070	8908	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
1750	1780	N4012V	214	1390	5167	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	219	1310	7794	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	227	1250	10392	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
2000	1780	N4514V	242	1570	5905	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	248	1480	8908	80	200	96.0	95.5	94.5	87.0	86.0	82.0	27095
	885	N5014V	255	1400	11877	80	200	96.0	95.5	94.5	84.5	83.0	74.0	29244
2250	1780	N4514V	270	1750	6643	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	277	1660	9979	80	200	96.0	95.5	94.5	87.5	86.5	82.5	26444
	885	N5014V	285	1570	13362	80	200	96.0	95.5	94.5	85.0	83.5	74.5	29244
2500	1780	N4514V	296	1920	7381	80	200	96.5	96.0	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	305	1820	11088	80	200	96.5	96.0	95.0	88.0	87.0	83.0	26444

Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.

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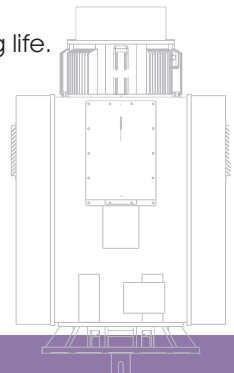
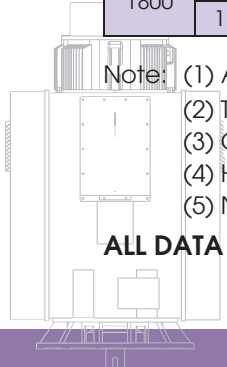


TATUNG

HIGH VOLTAGE VERTICAL MOTOR
TEAAC Type, Squirrel Cage
3 Phase , 60Hz 6600V, S.F. 1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
400	880	N3511V	37	200	2389	80	200	94.0	93.5	92.5	76.0	72.5	63.5	15465
450	1180	N3511V	38	225	2004	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	40	215	2688	80	200	94.5	94.0	93.0	78.0	74.5	65.5	18122
500	1775	N3511V	40	255	1480	80	200	94.5	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	42	250	2227	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	44	240	2986	80	200	94.5	94.0	93.0	78.0	74.5	65.5	18122
560	1775	N3511V	44	285	1658	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	47	280	2494	80	200	95.0	94.5	93.5	82.5	80.5	71.5	13966
	882	N4012V	48	260	3337	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
630	1775	N3511V	50	325	1865	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	52	310	2806	80	200	95.0	94.5	93.5	83.5	80.5	74.5	16292
	882	N4012V	54	295	3754	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
710	1775	N3511V	56	365	2102	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	58	345	3162	80	200	95.0	94.5	93.5	84.5	82.5	76.5	16292
	882	N4514V	60	325	4231	80	200	95.5	95.0	93.5	81.0	76.0	68.0	29894
800	1775	N3511V	64	410	2369	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	65	390	3563	80	200	95.0	94.5	93.5	84.5	82.5	76.5	16292
	882	N4514V	67	365	4767	80	200	95.5	94.5	93.0	81.5	77.5	70.0	29894
900	1775	N4012V	70	450	2665	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	72	430	4008	80	200	95.5	95.0	93.5	85.5	83.5	78.0	16292
	882	N4514V	74	405	5363	80	200	95.5	95.0	93.5	83.0	81.0	72.0	29894
1000	1775	N4012V	78	505	2961	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4514V	79	475	4454	80	200	95.5	95.0	94.0	86.0	85.0	81.0	27095
	885	N4514V	82	450	5939	80	200	95.5	95.0	93.5	83.0	81.5	72.0	29894
1120	1775	N4012V	86	560	3316	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	88	530	4988	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	92	500	6651	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
1250	1780	N4012V	97	625	3691	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	99	590	5567	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	102	560	7423	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
1400	1780	N4514V	107	690	4134	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	109	655	6235	80	200	96.0	95.5	94.5	87.0	86.0	82.0	27095
	885	N5014V	113	620	8314	80	200	96.0	95.5	94.5	84.5	83.0	74.0	29244
1600	1780	N4514V	121	785	4724	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	124	745	7096	80	200	96.0	95.5	94.5	87.5	86.5	82.5	26444
	885	N5014V	128	700	9502	80	200	96.0	95.5	94.5	85.0	83.5	74.5	29244
1800	1780	N4514V	135	870	5315	80	200	96.5	96.0	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	138	830	7983	80	200	96.5	96.0	95.0	88.0	87.0	83.0	26444



Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.

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TATUNG

HIGH VOLTAGE VERTICAL MOTOR

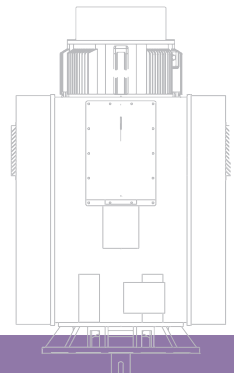
TEAAC Type, Squirrel Cage
3 Phase , 60Hz 11000V, S.F. 1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
600	880	N4012V	32	175	3583	80	200	94.5	94.0	93.0	77.5	74.0	65.0	18122
700	1180	N4012V	35	205	3118	80	200	95.0	94.5	93.5	83.0	80.0	74.0	16292
	880	N4012V	37	200	4181	80	200	95.0	94.5	93.0	78.0	74.5	65.5	18122
800	1180	N4012V	39	235	3563	80	200	95.0	94.5	93.5	83.5	80.5	74.5	16292
	882	N4514V	41	225	4767	80	200	95.0	94.5	93.0	80.0	75.0	66.0	29894
900	1180	N4012V	44	280	4008	80	200	95.5	95.0	93.5	84.5	82.5	76.5	16292
	882	N4514V	46	250	5363	80	200	95.5	95.0	93.5	81.0	76.0	68.0	29894
1000	1775	N4012V	47	300	2961	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	48	285	4454	80	200	95.5	95.0	93.5	85.5	83.5	78.0	16292
	882	N4514V	49	270	5959	80	200	95.5	95.0	93.5	83.0	81.0	72.0	29894
1250	1775	N4012V	58	375	3701	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	59	355	5567	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	61	335	7423	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
1350	1780	N4012V	63	405	3986	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	64	380	6013	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	66	365	8017	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
1500	1780	N4514V	69	445	4429	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	70	420	6681	80	200	96.0	95.5	94.5	87.0	86.0	82.0	27095
	885	N5014V	72	395	8908	80	200	96.0	95.5	94.5	84.5	83.0	74.0	29244
1750	1780	N4514V	79	515	5167	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	82	485	7761	80	200	96.0	95.5	94.5	87.5	86.5	82.5	26444
	885	N5014V	84	460	10392	80	200	96.0	95.5	94.5	85.0	83.5	74.5	29244
2000	1780	N4514V	90	585	5905	80	200	96.0	95.5	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	93	555	8870	80	200	96.0	95.5	95.0	88.0	87.0	83.0	26444

Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.

ALL DATA ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

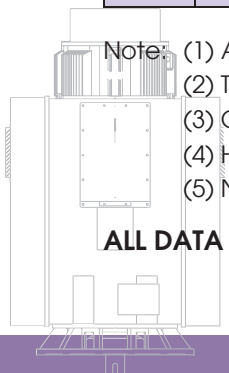


TATUNG

MEDIUM VOLTAGE VERTICAL MOTOR
Weather-Protected Type I and Type II, Squirrel Cage
3 Phase , 60Hz 2300V, S.F.1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
600	880	N3511V	157	865	3583	80	200	94.0	93.5	92.5	76.0	72.5	63.5	15465
700	1180	N3511V	170	1020	3118	80	200	94.0	93.5	92.5	82.0	80.0	71.0	13966
	880	N3511V	181	995	4181	80	200	94.0	93.5	92.5	77.0	73.5	64.5	15465
800	1180	N3511V	193	1160	3563	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	203	1110	4778	80	200	94.5	94.0	93.0	78.0	74.5	65.5	15465
900	1775	N3511V	206	1340	2665	80	200	94.5	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	218	1300	4008	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	229	1250	5375	80	200	94.5	94.0	93.0	78.0	74.5	65.5	18122
1000	1775	N3511V	228	1480	2961	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	239	1430	4454	80	200	95.0	94.5	93.5	82.5	80.5	71.5	13966
	882	N4012V	245	1340	5959	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
1250	1775	N3511V	285	1850	3701	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	290	1740	5567	80	200	95.5	95.0	93.5	84.5	82.5	76.5	16292
	882	N4514V	303	1660	7448	80	200	95.5	95.0	93.5	81.0	76.0	68.0	29894
1350	1775	N3511V	308	1990	3997	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	313	1870	6013	80	200	95.5	95.0	93.5	84.5	82.5	76.5	16292
	882	N4514V	325	1780	8044	80	200	95.5	94.5	93.0	81.5	77.5	70.0	29894
1500	1775	N4012V	334	2170	4441	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	344	2060	6681	80	200	95.5	95.0	93.5	85.5	83.5	78.0	16292
	882	N4514V	354	1940	8938	80	200	95.5	95.0	93.5	83.0	81.0	72.0	29894
1750	1775	N4012V	390	2530	5182	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4514V	399	2390	7794	80	200	95.5	95.0	94.0	86.0	85.0	81.0	27095
	885	N4514V	413	2270	10392	80	200	95.5	95.0	93.5	83.0	81.5	72.0	29894
2000	1775	N4012V	443	2880	5922	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	453	2720	8908	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	470	2580	11877	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
2250	1780	N4012V	499	3240	6643	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	510	3060	10021	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	528	2900	13362	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
2500	1780	N4514V	548	3560	7381	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	561	3360	11135	80	200	96.0	95.5	94.5	87.0	86.0	82.0	27095
	885	N5014V	577	3170	14846	80	200	96.0	95.5	94.5	84.5	83.0	74.0	29244
2750	1780	N4514V	596	3870	8120	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	613	3670	12196	80	200	96.0	95.5	94.5	87.5	86.5	82.5	26444
	885	N5014V	631	3470	16331	80	200	96.0	95.5	94.5	85.0	83.5	74.5	29244
3000	1780	N4514V	643	4180	8858	80	200	96.5	96.0	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	662	3960	13305	80	200	96.5	96.0	95.0	88.0	87.0	83.0	26444



Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.

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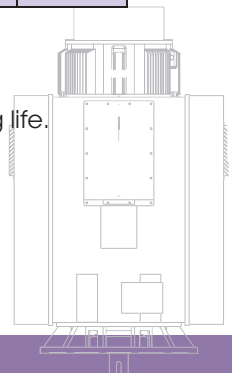
TATUNG

MEDIUM VOLTAGE VERTICAL MOTOR
Weather-Protected Type I and Type II, Squirrel Cage
3 Phase , 60Hz 4160V, S.F.1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
600	880	N3511V	87	475	3583	80	200	94.0	93.5	92.5	76.0	72.5	63.5	15465
700	1180	N3511V	94	560	3118	80	200	94.0	93.5	92.5	82.0	80.0	71.0	13966
	880	N3511V	100	550	4181	80	200	94.0	93.5	92.5	77.0	73.5	64.5	15465
800	1180	N3511V	107	640	3563	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	112	615	4778	80	200	94.5	94.0	93.0	78.0	74.5	65.5	18122
900	1775	N3511V	114	740	2665	80	200	94.5	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	120	720	4008	80	200	94.5	94.0	93.0	82.0	80.0	71.0	13966
	880	N4012V	126	695	5375	80	200	94.5	94.0	93.0	78.0	74.5	65.5	18122
1000	1775	N3511V	126	815	2961	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N3511V	132	790	4454	80	200	95.0	94.5	93.5	82.5	80.5	71.5	13966
	882	N4012V	135	740	5959	80	200	95.0	94.5	93.0	80.5	75.5	67.5	18122
1250	1775	N3511V	157	1020	3701	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	160	960	5567	80	200	95.5	95.0	93.5	84.5	82.5	76.5	16292
	882	N4514V	167	920	7448	80	200	95.5	95.0	93.5	81.0	76.0	68.0	29894
1350	1775	N3511V	170	1100	3997	80	200	95.0	94.5	93.5	86.5	85.0	82.0	12059
	1180	N4012V	173	1030	6013	80	200	95.5	95.0	93.5	84.5	82.5	76.5	16292
	882	N4514V	180	985	8044	80	200	95.5	94.5	93.0	81.5	77.5	70.0	29894
1500	1775	N4012V	185	1200	4441	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	190	1140	6681	80	200	95.5	95.0	93.5	85.5	83.5	78.0	16292
	882	N4514V	196	1070	8938	80	200	95.5	95.0	93.5	83.0	81.0	72.0	29894
1750	1775	N4012V	216	1400	5182	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4514V	221	1320	7794	80	200	95.5	95.0	94.0	86.0	85.0	81.0	27095
	885	N4514V	229	1250	10392	80	200	95.5	95.0	93.5	83.0	81.5	72.0	29894
2000	1775	N4012V	245	1590	5922	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	251	1500	8908	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	260	1420	11877	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
2250	1780	N4012V	276	1790	6643	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	282	1690	10021	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	292	1600	13362	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
2500	1780	N4514V	303	1960	7381	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	310	1850	11135	80	200	96.0	95.5	94.5	87.0	86.0	82.0	27095
	885	N5014V	319	1750	14846	80	200	96.0	95.5	94.5	84.5	83.0	74.0	29244
2750	1780	N4514V	330	2140	8120	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	339	2030	12196	80	200	96.0	95.5	94.5	87.5	86.5	82.5	26444
	885	N5014V	349	1910	16331	80	200	96.0	95.5	94.5	85.0	83.5	74.5	29244
3000	1780	N4514V	356	2310	8858	80	200	96.5	96.0	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	366	2190	13305	80	200	96.5	96.0	95.0	88.0	87.0	83.0	26444

Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.



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TATUNG

HIGH VOLTAGE VERTICAL MOTOR

Weather-Protected Type I and Type II, Squirrel Cage
3 Phase , 60Hz 6600V, S.F. 1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
500	880	N3511V	45	245	2986	80	200	94.0	93.5	92.5	76.5	73.0	64.0	7015
600	880	N3511V	54	295	3583	80	200	94.0	93.5	92.5	76.5	73.0	64.0	7015
700	1180	N3511V	59	350	3118	80	200	94.5	94.0	93.0	82.0	80.0	71.0	6335
	880	N3511V	62	340	4181	80	200	94.5	94.0	93.0	78.0	74.5	65.5	7015
800	1775	N3511V	64	415	2369	80	200	94.5	94.5	93.5	86.5	85.0	82.0	5470
	1180	N3511V	67	400	3563	80	200	94.5	94.0	93.0	82.0	80.0	71.0	6335
	880	N4012V	71	385	4778	80	200	94.5	94.0	93.0	78.0	74.5	65.5	8220
900	1775	N3511V	71	460	2665	80	200	95.0	94.5	93.5	86.5	85.0	82.0	5470
	1180	N3511V	75	445	4008	80	200	95.0	94.5	93.5	82.5	80.5	71.5	6335
	882	N4012V	77	420	5363	80	200	95.0	94.5	93.0	80.5	75.5	67.5	8220
1000	1775	N3511V	79	515	2961	80	200	95.0	94.5	93.5	86.5	85.0	82.0	5470
	1180	N4012V	82	490	4454	80	200	95.0	94.5	93.5	83.5	80.5	74.5	7390
	882	N4012V	85	465	5959	80	200	95.0	94.5	93.0	80.5	75.5	67.5	8220
1250	1775	N3511V	99	645	3701	80	200	95.0	94.5	93.5	86.5	85.0	82.0	5470
	1180	N4012V	102	605	5567	80	200	95.0	94.5	93.5	84.5	82.5	76.5	7390
	882	N4514V	105	575	7448	80	200	95.5	94.5	93.0	81.5	77.5	70.0	13560
1350	1775	N4012V	105	680	3997	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	108	645	6013	80	200	95.5	95.0	93.5	85.5	83.5	78.0	7390
	882	N4514V	111	611	8044	80	200	95.5	95.0	93.5	83.0	81.0	72.0	13560
1500	1775	N4012V	116	755	4441	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4514V	119	715	6681	80	200	95.5	95.0	94.0	86.0	85.0	81.0	12290
	885	N4514V	123	675	8908	80	200	95.5	95.0	93.5	83.0	81.5	72.0	13560
1750	1775	N4012V	135	875	5182	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	138	825	7794	80	200	95.5	95.0	94.0	86.5	85.5	81.5	12290
	885	N5014V	143	785	10392	80	200	95.5	95.0	93.5	83.5	81.5	72.5	13265
2000	1780	N4012V	154	1000	5905	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	158	945	8908	80	200	95.5	95.0	94.0	86.5	85.5	81.5	12290
	885	N5014V	164	900	11877	80	200	95.5	95.0	93.5	83.5	81.5	72.5	13265
2250	1780	N4514V	172	1110	6643	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	176	1050	10021	80	200	96.0	95.5	94.5	87.0	86.0	82.0	12290
	885	N5014V	181	995	13362	80	200	96.0	95.5	94.5	84.5	83.0	74.0	13265
2500	1780	N4514V	189	1220	7381	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	194	1160	11088	80	200	96.0	95.5	94.5	87.5	86.5	82.5	11995
	885	N5014V	200	1090	14846	80	200	96.0	95.5	94.5	85.0	83.5	74.5	13265
2750	1780	N4514V	205	1330	8120	80	200	96.5	96.0	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	211	1260	12196	80	200	96.5	96.0	95.0	88.0	87.0	83.0	11995

Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.

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TATUNG

HIGH VOLTAGE VERTICAL MOTOR

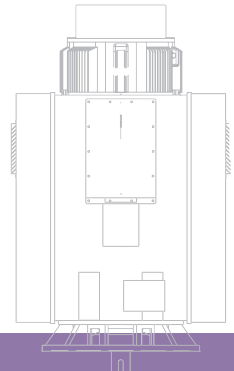
Weather-Protected Type I and Type II, Squirrel Cage
3 Phase , 60Hz 11000V, S.F. 1.0
Class F Insulation, 40°C Ambient, Continuous Duty

PERFORMANCE DATA

OUTPUT HP	FULL LOAD RPM	FRAME SIZE	CURRENT		TORQUE			EFFICIENCY			POWER FACTOR			Maximum Down Thrust (3) (lb)
			FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (lb-ft)	LOCKED ROTOR (%)	BREAK DOWN (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	FULL LOAD (%)	3 / 4 LOAD (%)	1 / 2 LOAD (%)	
700	880	N4012V	37	205	4181	80	200	94.5	94.0	93.0	77.5	74.0	65.0	18122
800	880	N4012V	43	235	4778	80	200	94.5	94.0	93.0	77.5	74.0	65.0	18122
900	1180	N4012V	45	265	4008	80	200	95.0	94.5	93.5	83.0	80.0	74.0	16292
	880	N4012V	48	260	5375	80	200	95.0	94.5	93.0	78.0	74.5	65.5	18122
1000	1180	N4012V	49	295	4454	80	200	95.0	94.5	93.5	83.5	80.5	74.5	16292
	882	N4514V	52	280	5959	80	200	95.0	94.5	93.0	80.0	75.0	66.0	29894
1250	1775	N4012V	58	375	3701	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4012V	60	355	5567	80	200	95.5	95.0	93.5	85.5	83.5	78.0	16292
	882	N4514V	62	335	7448	80	200	95.5	95.0	93.5	83.0	81.0	72.0	29894
1350	1775	N4012V	63	405	3997	80	200	95.5	94.5	93.0	88.0	87.0	83.0	(4)
	1180	N4514V	64	385	6013	80	200	95.5	95.0	94.0	86.0	85.0	81.0	27095
	885	N4514V	67	365	8017	80	200	95.5	95.0	93.5	83.0	81.5	72.0	29894
1500	1775	N4012V	69	450	4441	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	71	425	6681	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	74	405	8908	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
1750	1780	N4012V	81	525	5167	80	200	95.5	94.5	93.0	88.5	87.5	83.5	(4)
	1180	N4514V	83	495	7794	80	200	95.5	95.0	94.0	86.5	85.5	81.5	27095
	885	N5014V	86	470	10392	80	200	95.5	95.0	93.5	83.5	81.5	72.5	29244
2000	1780	N4514V	92	595	5905	80	200	95.5	94.5	93.0	89.5	88.5	84.5	(4)
	1180	N4514V	94	560	8908	80	200	96.0	95.5	94.5	87.0	86.0	82.0	27095
	885	N5014V	97	530	11877	80	200	96.0	95.5	94.5	84.5	83.0	74.0	29244
2250	1780	N4514V	102	660	6643	80	200	96.0	95.5	94.5	90.0	89.0	86.0	(4)
	1185	N5014V	105	625	9979	80	200	96.0	95.5	94.5	87.5	86.5	82.5	26444
	885	N5014V	108	590	13362	80	200	96.0	95.5	94.5	85.0	83.5	74.5	29244
2500	1780	N4514V	113	730	7381	80	200	96.0	95.5	95.0	90.5	89.5	86.5	(4)
	1185	N5014V	116	695	11088	80	200	96.0	95.5	95.0	88.0	87.0	83.0	26444

Note: (1) Above data are typical values and for reference only.
(2) Test method: Performance test per IEEE standard 112 method F1.
(3) Only for high thrust motors. The allowable maximum down thrust is based on 5 years L-10 bearing life.
(4) High thrust motor is available on request.
(5) Non-reverse ratchet mechanism is available on request for high thrust motors.

ALL DATA ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.



TATUNG

HIGH THRUST VERTICAL MOTOR
OUTLINE DRAWING FOR TOTALLY ENCLOSED AIR TO AIR COOLED (TEAAC)

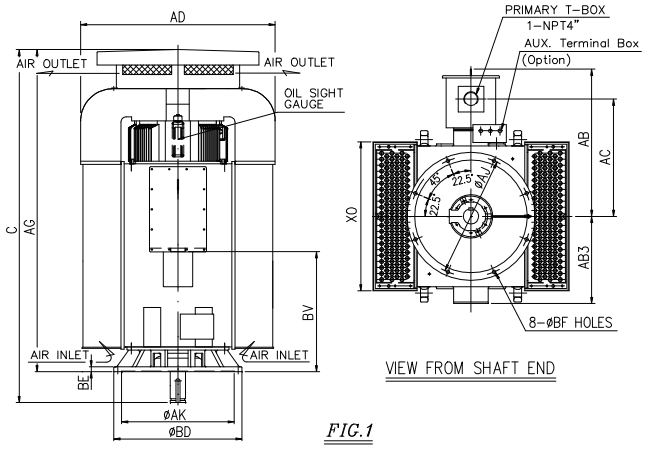


FIG.1

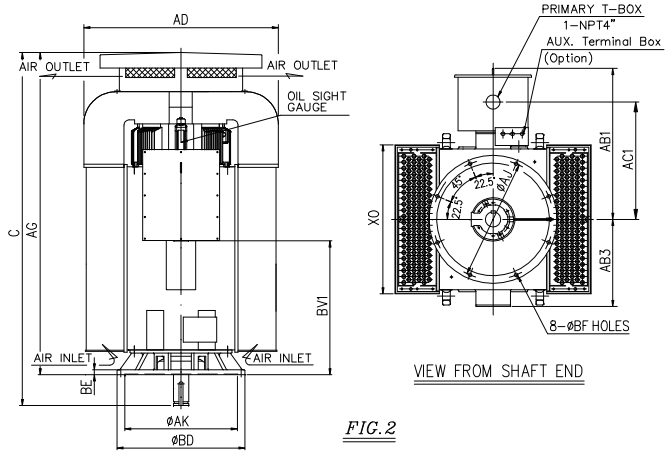


FIG.2

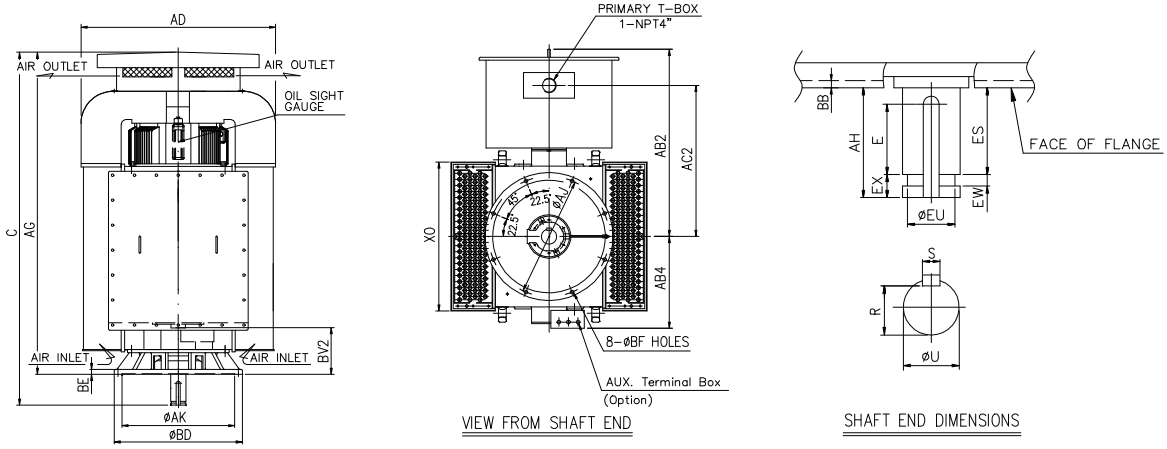


FIG.3

FRAME NO.	POLES	9) FIG. NO.	FLANGE						C	XO	9) AB	9) AB1	9) AB2	9) AB3	9) AB4	9) AC	9) AC1	9) AC2	9) BV
			AK	AJ	BB	BD	BE	BF											
N3511V	4~8	1or2or3	34.646	37.01	0.23	39.37	1.50	1.10	108.54	45.24	45.28	46.46	57.56	26.77	28.23	36.10	36.10	46.46	36.93
N4012V	4~8	1or2or3	34.646	37.01	0.26	39.37	1.77	1.10	121.89	49.25	47.24	48.43	59.53	28.74	30.20	38.07	38.07	48.43	42.24
N4514V	4~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	124.84	53.11	49.21	50.39	61.50	30.71	32.17	40.04	40.04	50.39	42.72
N5014V	6~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	128.66	56.73	51.18	52.36	63.47	32.68	34.13	42.01	42.01	52.36	45.08

FRAME NO.	POLES	9) FIG. NO.	9) BV1	9) BV2	AG	AD	SHAFT END									BEARING		APPROX. WEIGHT (lb)
							U	E	S	R	EU	EW	ES	EX	AH	D.E.	O.D.E.	
N3511V	4~8	1or2or3	41.18	14.41	99.10	59.80	4.75	7.08	1.25	4.041	4.00	0.5	8.44	1.0	9.44	7) 6226C3	29330+ 8) 6028	9920
N4012V	4~8	1or2or3	46.50	19.72	110.47	65.12	5.0	8.66	1.25	4.296	4.25	0.75	9.92	1.5	11.42	8) 6036	29334+ 8) 6032	15870
N4514V	4~8	1or2or3	46.97	20.20	113.43	76.26	5.5	8.66	1.25	4.803	4.75	0.75	9.92	1.5	11.42	8) 6040	29340+ 8) 6038	21825
N5014V	6~8	1or2or3	49.33	22.56	115.28	82.44	6.3	9.84	1.50	5.459	5.55	0.75	11.88	1.5	13.38	8) 6044	29340+ 8) 6038	24250

Unit: inch

Note:
1) Diameter U tolerance : +0.00 inch ~ -0.001 inch
2) Dimension R tolerance : +0.00 inch ~ -0.015 inch
3) Diameter EU tolerance : +0.00 inch ~ -0.010 inch for N3511V~N4012V.
   Diameter EU tolerance : +0.00 inch ~ -0.015 inch for N4514V~N5014V.
4) Dimension AK tolerance : +0.003 inch ~ +0.00 inch
5) Dimensions C, AB, AB1, AB2, AB3, AB4, BV, BV1, BV2, AD, AG, XO, are approximate values.
6) C dimension may be extended to meet low noise level.
7) Grease lubricated.
8) Oil lubricated.
9) Fig.1 for 4160 volts and below.
   Fig.2 for 6000 volts and 6600 volts.
   Fig.3 for 10000 volts and above .

HIGH THRUST VERTICAL MOTOR
OUTLINE DRAWING FOR WEATHER-PROTECTED TYPE I (WPI)

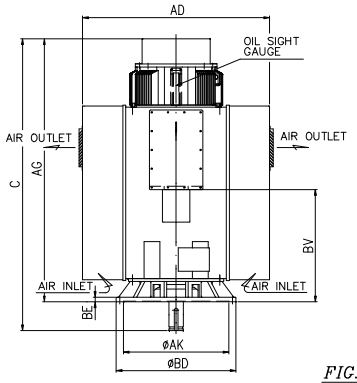
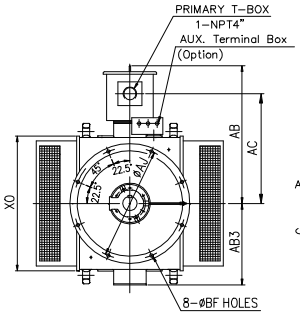


FIG.1



VIEW FROM SHAFT END

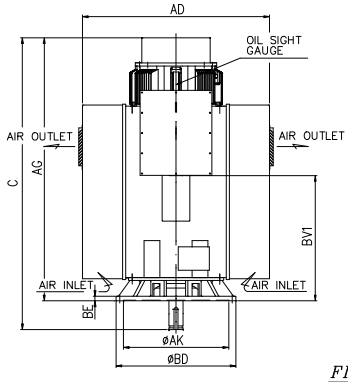
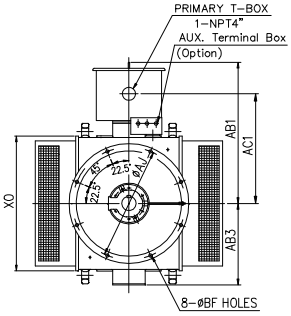


FIG.2



VIEW FROM SHAFT END

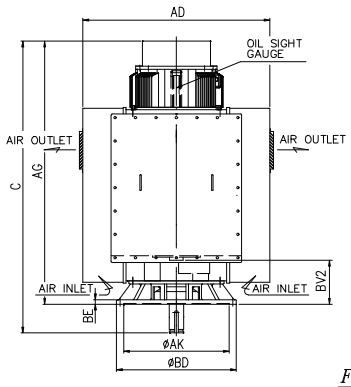
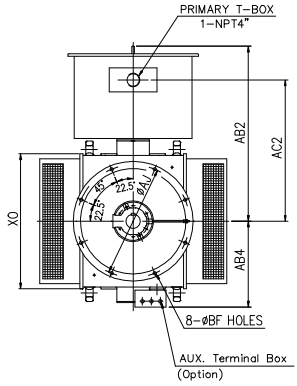
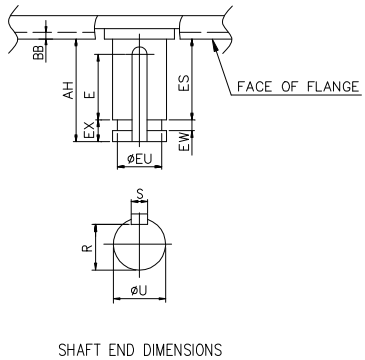


FIG.3



VIEW FROM SHAFT END



SHAFT END DIMENSIONS

FRAME NO.	POLES	FIG. NO. 9)	FLANGE						C	XO	AB 9)	AB1 9)	AB2 9)	AB3 9)	AB4 9)	AC 9)	AC1 9)	AC2 9)	BV 9)
			AK	AJ	BB	BD	BE	BF											
N3511V	4~8	1or2or3	34.646	37.01	0.23	39.37	1.50	1.10	95.95	45.37	45.28	46.46	57.56	26.77	28.23	36.10	36.10	46.46	36.93
N4012V	4~8	1or2or3	34.646	37.01	0.26	39.37	1.77	1.10	107.72	48.19	47.24	48.43	59.53	28.74	30.20	38.07	38.07	48.43	42.24
N4514V	4~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	112.40	52.36	49.21	50.39	61.50	30.71	32.17	40.04	40.04	50.39	42.72
N5014V	6~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	115.95	55.87	51.18	52.36	63.47	32.68	34.13	42.01	42.01	52.36	45.08

FRAME NO.	POLES	FIG. NO. 9)	BV1 9)	BV2 9)	AG	AD	SHAFT END									BEARING		APPROX. WEIGHT (lb)
							U	E	S	R	EU	EW	ES	EX	AH	D.E.	O.D.E.	
N3511V	4~8	1or2or3	41.18	14.41	86.51	52.36	4.75	7.08	1.25	4.041	4.00	0.5	8.44	1.0	9.44	7) 6226C3	29330+ 8) 6028	8820
N4012V	4~8	1or2or3	46.50	19.72	96.30	58.43	5.0	8.66	1.25	4.296	4.25	0.75	9.92	1.5	11.42	8) 6036	29334+ 8) 6032	14330
N4514V	4~8	1or2or3	46.97	20.20	100.98	67.13	5.5	8.66	1.25	4.803	4.75	0.75	9.92	1.5	11.42	8) 6040	29340+ 8) 6038	19465
N5014V	6~8	1or2or3	49.33	22.56	102.57	71.26	6.3	9.84	1.50	5.459	5.55	0.75	11.88	1.5	13.38	8) 6044	29340+ 8) 6038	20945

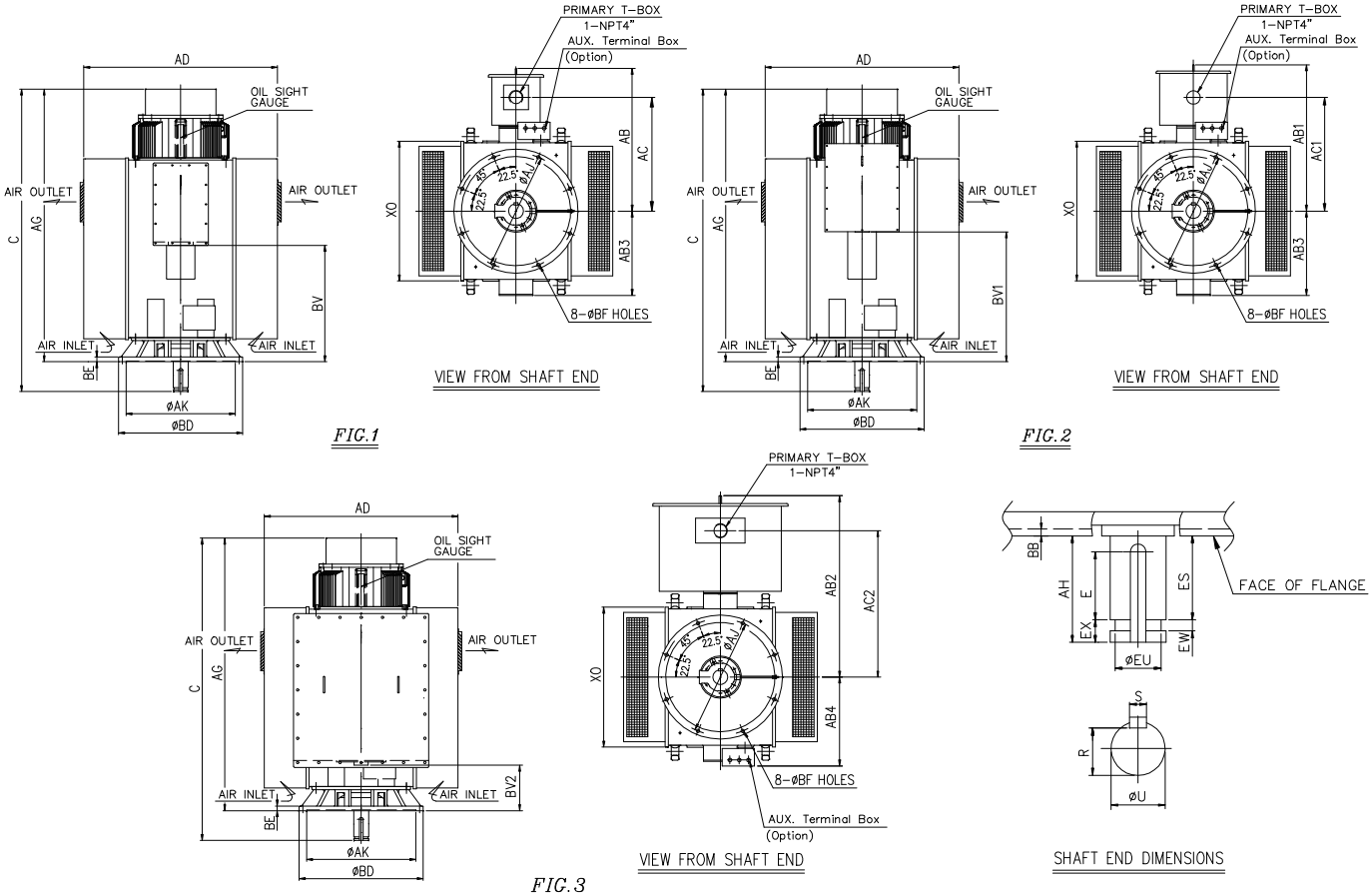
Unit: inch

Note:

1) Diameter U tolerance : +0.00 inch ~ -0.001 inch
2) Dimension R tolerance : +0.00 inch ~ -0.015 inch
3) Diameter EU tolerance : +0.00 inch ~ -0.010 inch for N3511V~N4012V.
   Diameter EU tolerance : +0.00 inch ~ -0.015 inch for N4514V~N5014V.
4) Dimension AK tolerance : +0.003 inch ~ +0.00 inch
5) Dimensions C, AB, AB1, AB2, AB3, AB4, BV, BV1, BV2, AD, AG, XO, are approximate values.
6) C dimension may be extended to meet low noise level.
7) Grease lubricated.
8) Oil lubricated.
9) Fig.1 for 4160 volts and below.
   Fig.2 for 6000 volts and 6600 volts.
   Fig.3 for 10000 volts and above .

TATUNG

HIGH THRUST VERTICAL MOTOR OUTLINE DRAWING FOR WEATHER-PROTECTED TYPE II (WPII)



FRAME NO.	POLES	9) FIG. NO.	FLANGE						C	XO	9) AB	9) AB1	9) AB2	9) AB3	9) AB4	9) AC	9) AC1	9) AC2	9) BV
			AK	AJ	BB	BD	BE	BF											
N3511V	4~8	1or2or3	34.646	37.01	0.23	39.37	1.50	1.10	95.95	44.37	45.28	46.46	57.56	26.77	28.23	36.10	36.10	46.46	36.93
N4012V	4~8	1or2or3	34.646	37.01	0.26	39.37	1.77	1.10	107.72	48.19	47.24	48.43	59.53	28.74	30.20	38.07	38.07	48.43	42.24
N4514V	4~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	112.40	52.36	49.21	50.39	61.50	30.71	32.17	40.04	40.04	50.39	42.72
N5014V	6~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	115.95	55.87	51.18	52.36	63.47	32.68	34.13	42.01	42.01	52.36	45.08

FRAME NO.	POLES	9) FIG. NO.	9) BV1	9) BV2	AG	AD	SHAFT END									BEARING		APPROX. WEIGHT (lb)
							U	E	S	R	EU	EW	ES	EX	AH	D.E.	O.D.E.	
N3511V	4~8	1or2or3	41.18	14.41	86.51	61.50	4.75	7.08	1.25	4.041	4.00	0.5	8.44	1.0	9.44	7) 6226C3	29330+ 8) 6028	9040
N4012V	4~8	1or2or3	46.50	19.72	96.30	67.56	5.0	8.66	1.25	4.296	4.25	0.75	9.92	1.5	11.42	8) 6036	29334+ 8) 6032	14550
N4514V	4~8	1or2or3	46.97	20.20	100.98	75.51	5.5	8.66	1.25	4.803	4.75	0.75	9.92	1.5	11.42	8) 6040	29340+ 8) 6038	19730
N5014V	6~8	1or2or3	49.33	22.56	102.57	79.65	6.3	9.84	1.50	5.459	5.55	0.75	11.88	1.5	13.38	8) 6044	29340+ 8) 6038	21605

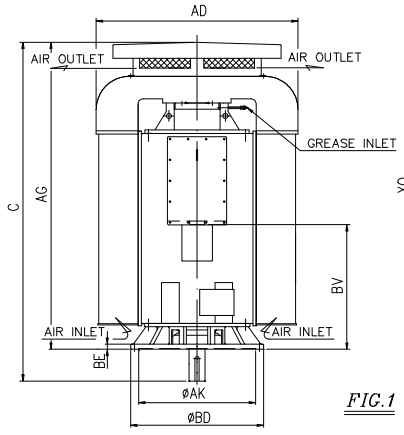
Unit: inch

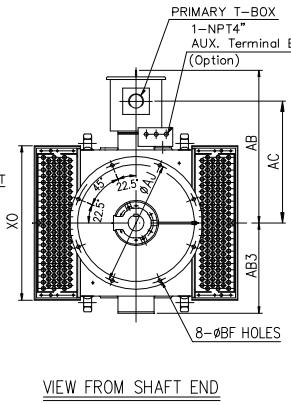
Note:

1) Diameter U tolerance : +0.00 inch ~ -0.001 inch
2) Dimension R tolerance : +0.00 inch ~ -0.015 inch
3) Diameter EU tolerance : +0.00 inch ~ -0.010 inch for N3511V~N4012V.
   Diameter EU tolerance : +0.00 inch ~ -0.015 inch for N4514V~N5014V.
4) Dimension AK tolerance : +0.003 inch ~ +0.00 inch
5) Dimensions C, AB, AB1, AB2, AB3, AB4, BV, BV1, BV2, AD, AG, XO, are approximate values.
6) C dimension may be extended to meet low noise level.
7) Grease lubricated.
8) Oil lubricated.
9) Fig.1 for 4160 volts and below.
   Fig.2 for 6000 volts and 6600 volts.
   Fig.3 for 10000 volts and above .

TATUNG

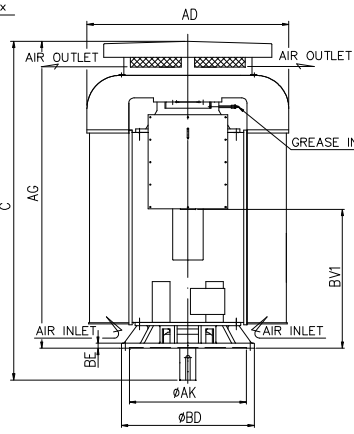
STANDARD VERTICAL MOTOR OUTLINE DRAWING FOR TOTALLY ENCLOSED AIR TO AIR COOLED (TEAAC)

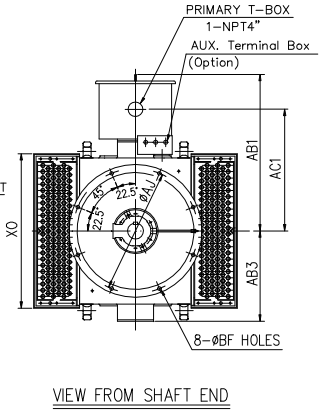




VIEW FROM SHAFT END

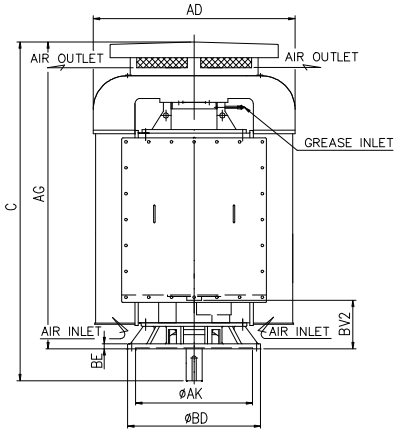
FIG.1

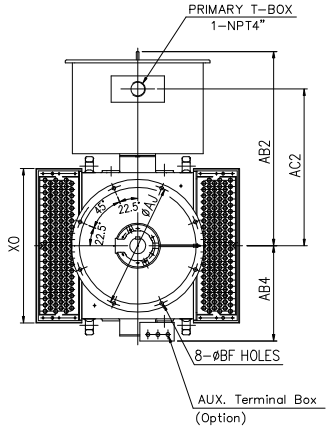




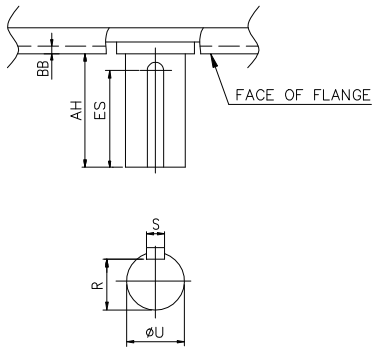
VIEW FROM SHAFT END

FIG.2





VIEW FROM SHAFT END



SHAFT END DIMENSIONS

FIG.3

FRAME NO.	POLES	7) FIG. NO.	FLANGE						C	XO	7) AB	7) AB1	7) AB2	7) AB3	7) AB4	7) AC	7) AC1	7) AC2
			AK	AJ	BB	BD	BE	BF										
N3511V	4~8	1or2or3	34.646	37.01	0.23	39.37	1.50	1.10	99.44	45.24	45.28	46.46	57.56	26.77	28.23	36.10	36.10	46.46
N4012V	4~8	1or2or3	34.646	37.01	0.26	39.37	1.77	1.10	109.37	49.25	47.24	48.43	59.53	28.74	30.20	38.07	38.07	48.43
N4514V	4~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	113.21	53.11	49.21	50.39	61.50	30.71	32.17	40.04	40.04	50.39
N5014V	6~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	120.51	56.73	51.18	52.36	63.47	32.68	34.13	42.01	42.01	52.36

FRAME NO.	POLES	7) FIG. NO.	7) BV	7) BV1	7) BV2	AG	AD	SHAFT END					BEARING 6)		APPROX. WEIGHT (lb)
								U	ES	S	R	AH	D.E.	O.D.E.	
N3511V	4~8	1or2or3	36.93	41.18	14.41	91.18	59.80	4.75	7.08	1.25	4.041	8.26	6226C3	7324B	9480
N4012V	4~8	1or2or3	42.24	46.50	19.72	99.53	65.12	5.0	8.66	1.25	4.296	9.84	6228C3	7324B	15210
N4514V	4~8	1or2or3	42.72	46.97	20.20	103.37	76.26	5.5	8.66	1.25	4.803	9.84	6230C3	7330B	20725
N5014V	6~8	1or2or3	45.08	49.33	22.56	108.7	82.44	6.3	9.84	1.50	5.459	11.81	6034C3	7330B	22930

Unit: inch

Note:

1) Diameter U tolerance : +0.00 inch ~ -0.001 inch
2) Dimension R tolerance : +0.00 inch ~ -0.015 inch
3) Dimension AK tolerance : +0.003 inch ~ +0.00 inch
4) Dimensions C, AB, AB1, AB2, AB3, AB4, BV, BV1, BV2, AD, AG, XO, are approximate values.
5) C dimension may be extended to meet low noise level.
6) Grease lubricated.
7) Fig.1 for 4160 volts and below.
   Fig.2 for 6000 volts and 6600 volts.
   Fig.3 for 10000 volts and above .

TATUNG

STANDARD VERTICAL MOTOR
OUTLINE DRAWING FOR WEATHER-PROTECTED TYPE I (WPI)

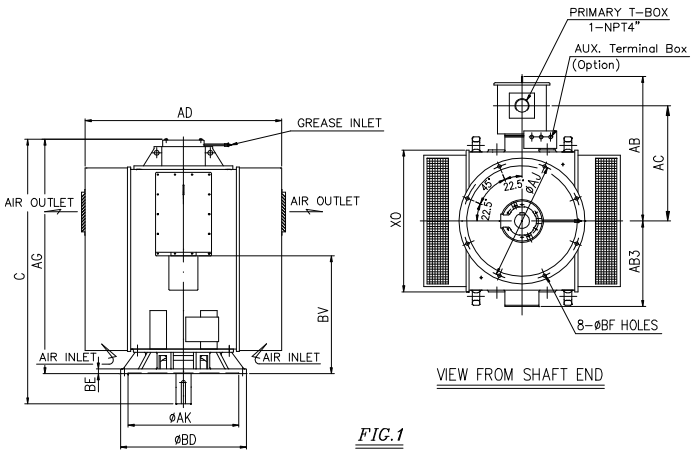


FIG.1

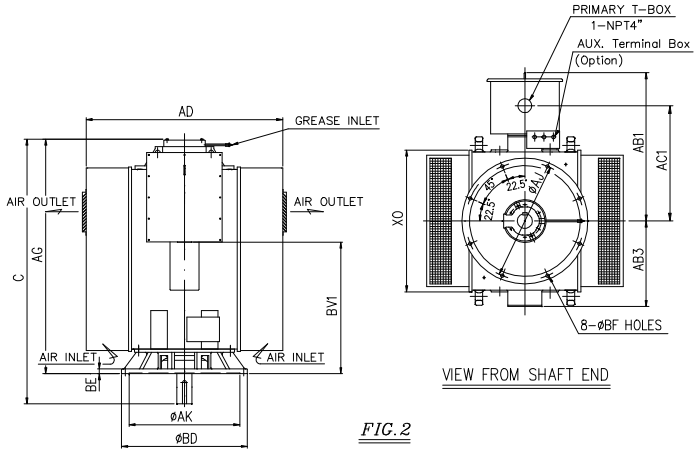


FIG.2

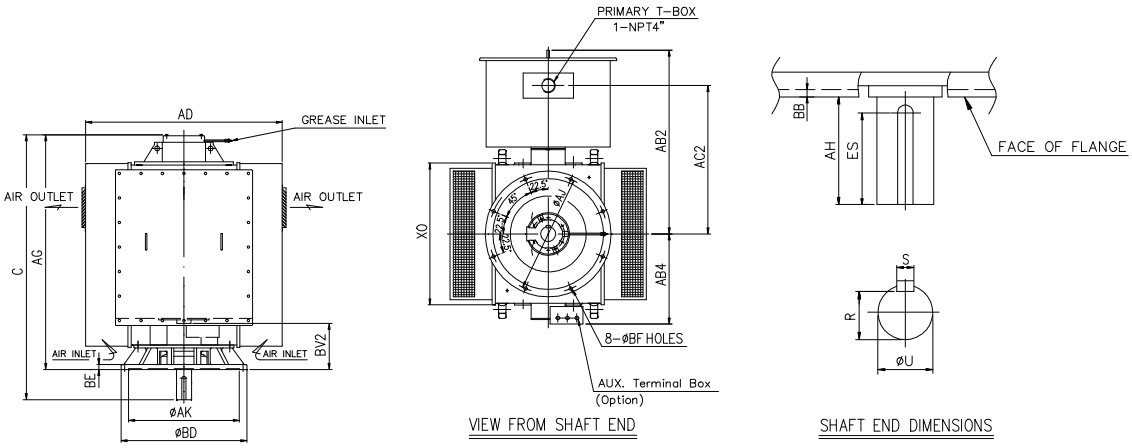


FIG.3

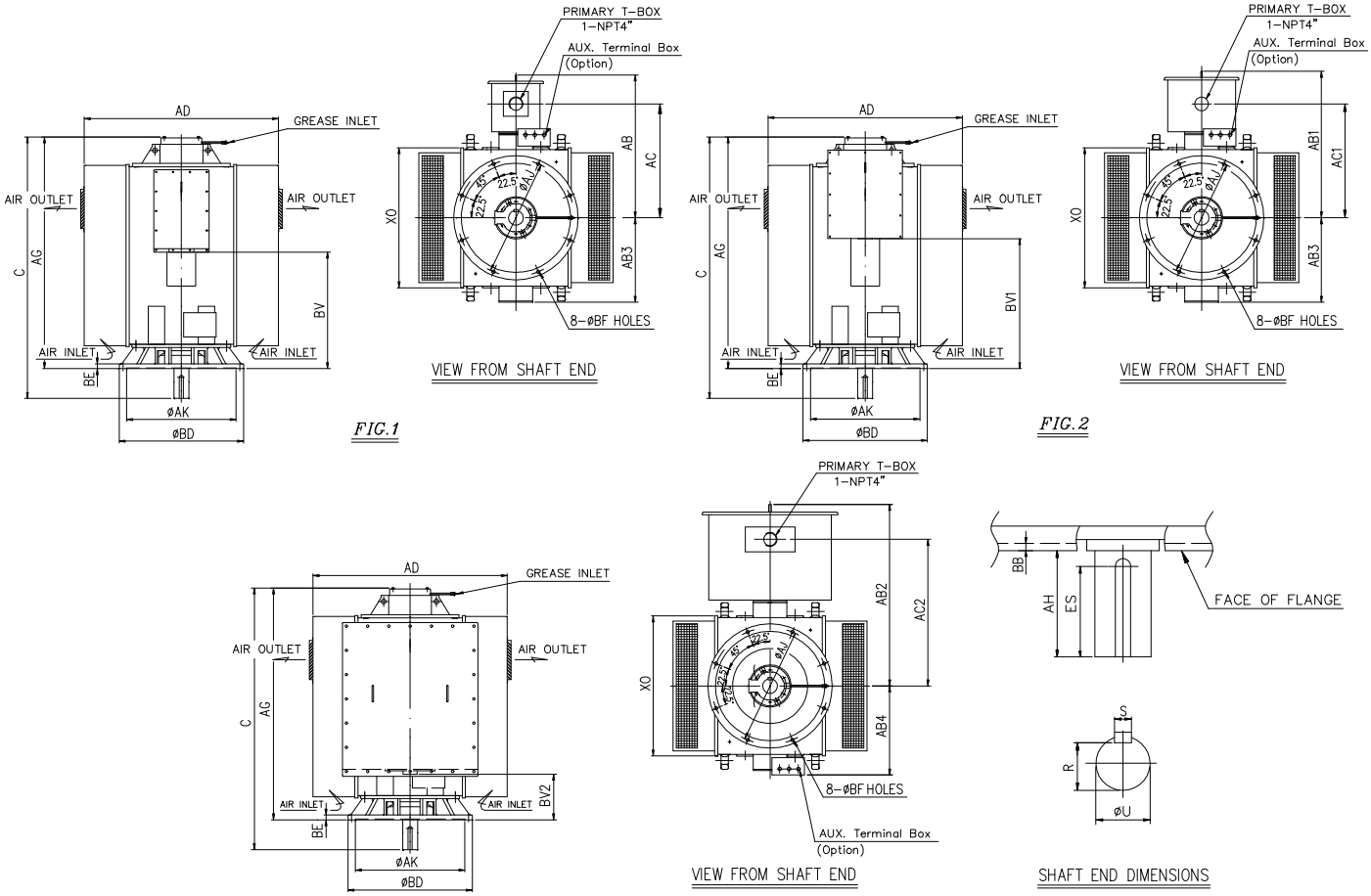
FRAME NO.	POLES	FIG. NO. 7)	FLANGE						C	XO	AB 7)	AB1 7)	AB2 7)	AB3 7)	AB4 7)	AC 7)	AC1 7)	AC2 7)
			AK	AJ	BB	BD	BE	BF										
N3511V	4~8	1or2or3	34.646	37.01	0.23	39.37	1.50	1.10	81.86	44.37	45.28	46.46	57.56	26.77	28.23	36.10	36.10	46.46
N4012V	4~8	1or2or3	34.646	37.01	0.26	39.37	1.77	1.10	91.81	48.19	47.24	48.43	59.53	28.74	30.20	38.07	38.07	48.43
N4514V	4~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	96.14	52.36	49.21	50.39	61.50	30.71	32.17	40.04	40.04	50.39
N5014V	6~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	99.68	55.87	51.18	52.36	63.47	32.68	34.13	42.01	42.01	52.36

FRAME NO.	POLES	FIG. NO. 7)	BV 7)	BV1 7)	BV2 7)	AG	AD	SHAFT END					BEARING 6)		APPROX. WEIGHT (lb)
								U	ES	S	R	AH	D.E.	O.D.E.	
N3511V	4~8	1or2or3	36.93	41.18	14.41	73.60	52.36	4.75	7.08	1.25	4.041	8.26	6226C3	7324B	8380
N4012V	4~8	1or2or3	42.24	46.50	19.72	81.97	58.43	5.0	8.66	1.25	4.296	9.84	6228C3	7324B	13890
N4514V	4~8	1or2or3	42.72	46.97	20.20	86.30	67.13	5.5	8.66	1.25	4.803	9.84	6230C3	7330B	18805
N5014V	6~8	1or2or3	45.08	49.33	22.56	87.87	71.26	6.3	9.84	1.50	5.459	11.81	6034C3	7330B	20280

Unit: inch

Note:
1) Diameter U tolerance : +0.00 inch ~ -0.001 inch
2) Dimension R tolerance : +0.00 inch ~ -0.015 inch
3) Dimension AK tolerance : +0.003 inch ~ +0.00 inch
4) Dimensions C, AB, AB1, AB2, AB3, AB4, BV, BV1, BV2, AD, AG, XO, are approximate values.
5) C dimension may be extended to meet low noise level.
6) Grease lubricated.
7) Fig.1 for 4160 volts and below.
Fig.2 for 6000 volts and 6600 volts.
Fig.3 for 10000 volts and above .

STANDARD VERTICAL MOTOR
OUTLINE DRAWING FOR WEATHER-PROTECTED TYPE II (WPII)



FRAME NO.	POLES	7) FIG. NO.	FLANGE						C	XO	7) AB	7) AB1	7) AB2	7) AB3	7) AB4	7) AC	7) AC1	7) AC2
			AK	AJ	BB	BD	BE	BF										
N3511V	4~8	1or2or3	34.646	37.01	0.23	39.37	1.50	1.10	81.86	44.37	45.28	46.46	57.56	26.77	28.23	36.10	36.10	46.46
N4012V	4~8	1or2or3	34.646	37.01	0.26	39.37	1.77	1.10	91.81	48.19	47.24	48.43	59.53	28.74	30.20	38.07	38.07	48.43
N4514V	4~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	96.14	52.36	49.21	50.39	61.50	30.71	32.17	40.04	40.04	50.39
N5014V	6~8	1or2or3	39.37	42.52	0.26	45.28	1.77	1.10	99.68	55.87	51.18	52.36	63.47	32.68	34.13	42.01	42.01	52.36

FRAME NO.	POLES	7) FIG. NO.	7) BV	7) BV1	7) BV2	AG	AD	SHAFT END					BEARING 6)		APPROX. WEIGHT (lb)
								U	ES	S	R	AH	D.E.	O.D.E.	
N3511V	4~8	1or2or3	36.93	41.18	14.41	73.60	61.50	4.75	7.08	1.25	4.041	8.26	6226C3	7324B	8600
N4012V	4~8	1or2or3	42.24	46.50	19.72	81.97	67.56	5.0	8.66	1.25	4.296	9.84	6228C3	7324B	14110
N4514V	4~8	1or2or3	42.72	46.97	20.20	86.30	75.51	5.5	8.66	1.25	4.803	9.84	6230C3	7330B	19180
N5014V	6~8	1or2or3	45.08	49.33	22.56	87.87	79.65	6.3	9.84	1.50	5.459	11.81	6034C3	7330B	20945

Unit: inch

Note:
1) Diameter U tolerance : +0.00 inch ~ -0.001 inch
2) Dimension R tolerance : +0.00 inch ~ -0.015 inch
3) Dimension AK tolerance : +0.003 inch ~ +0.00 inch
4) Dimensions C, AB, AB1, AB2, AB3, AB4, BV, BV1, BV2, AD, AG, XO, are approximate values.
5) C dimension may be extended to meet low noise level.
6) Grease lubricated.
7) Fig.1 for 4160 volts and below.
Fig.2 for 6000 volts and 6600 volts.
Fig.3 for 10000 volts and above .

MEMO

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TATUNG Sanhsia Motor Factory Facts

TATUNG Company Founded in 1918
Sanhsia Factory Land Area — 1,800,000 ft²
Total MV Motors Produced — over 30,000
Continuous Production since 1949
Voltage Range — thru 13,800 Volts
Test Facility through 50,000HP — IEC 60034-2-1 or
IEEE 112 Method F1
Location — 352 Shi-tong Rd., Sanhsia, New Taipei City 23743,
Taiwan