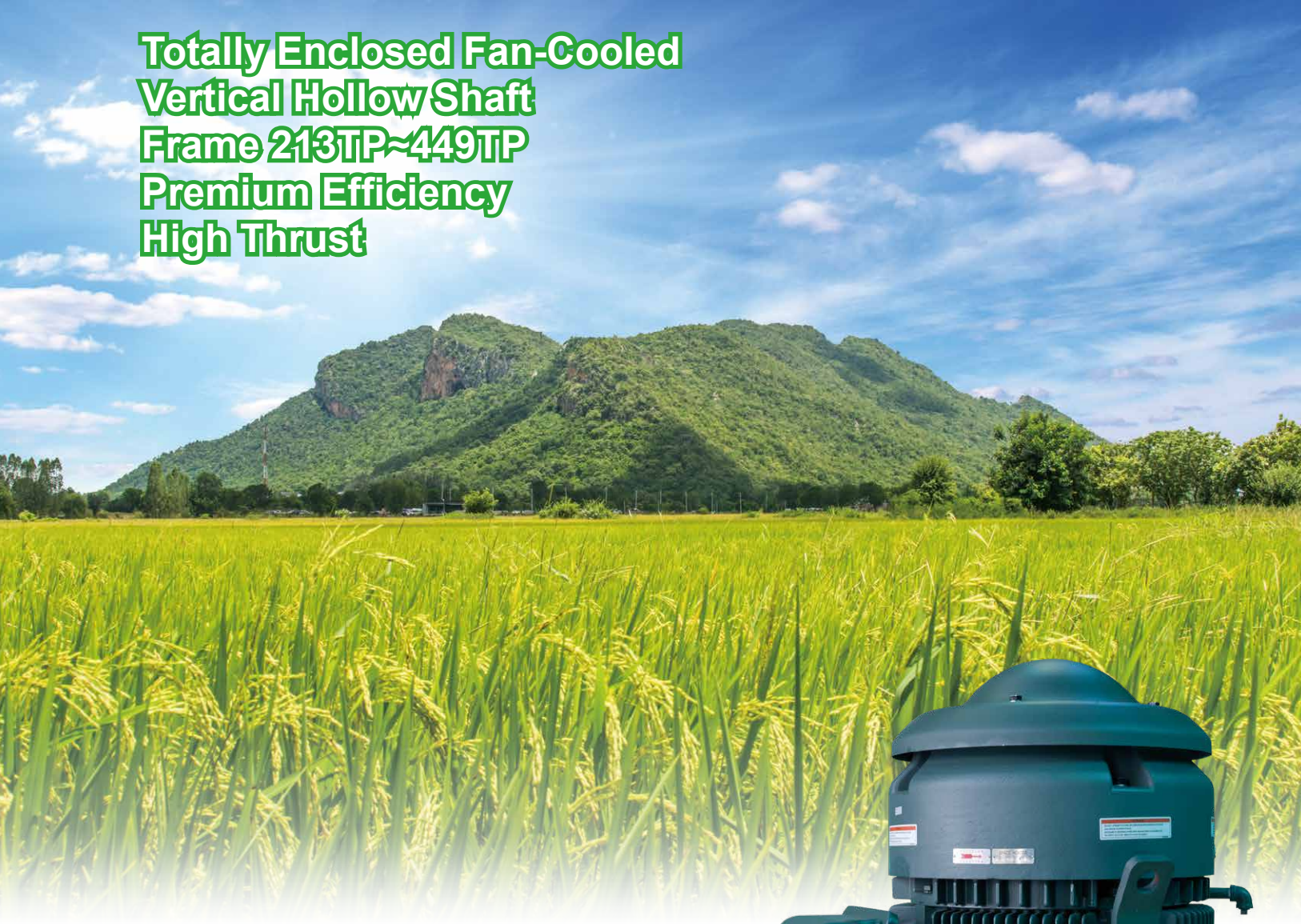


TEFC VHS Motors

FRITZTM
AC DC POWER EST.1953

HARVEST SERIES

**Totally Enclosed Fan-Cooled
Vertical Hollow Shaft
Frame 213TP~449TP
Premium Efficiency
High Thrust**



Does your motor perform good outdoors...



ISO 9001
BUREAU VERITAS
Certification



Totally Enclosed Fan Cooled motors are better suited for outdoor applications especially high humidity, corrosive or dirty environments, which makes it a better choice than WPI. Are you still willing to buy WPI motors for outdoor applications?

Why not upgrade your motor, right now!

Specifications

Electrical

- ▶ Meets NEMA Premium efficiency (2, 4, 6P)
- ▶ Rating -5HP up to 300HP
- ▶ Inverter Duty – VT 4:1(6P: V-T 3:1)
- ▶ Voltage and frequency:
-230 / 460V, 460V 60Hz
- ▶ Service factor : 1.15 or better
- ▶ Speed (SYN.):
- 3600RPM: Up to 75HP
- ▶ Class F insulation (meets MG1-31 Inverter duty)
- ▶ Class B temperature rise at SF 1.0

Mechanical

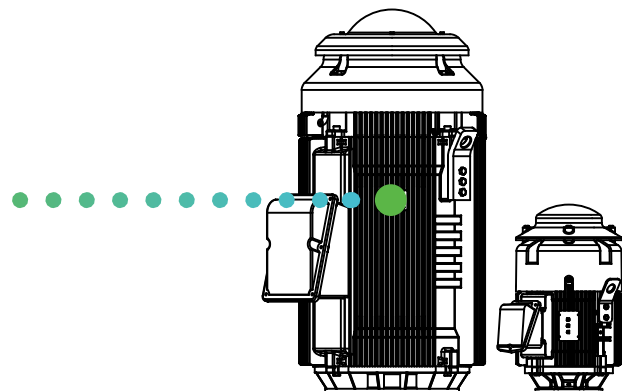
- ▶ Totally Enclosed Fan-Cooled (IP56)
- ▶ Alternative coupling as option
- ▶ Stator winding with 2 dips and bakes
- ▶ Rotation – C.C.W. (viewed from top)
- ▶ High thrust performance
- ▶ Shield guide (lower) bearing
- ▶ Lubrication for thrust (top) bearing
-Up to 280T: grease
-320T and above: oil
- ▶ Non-Reverse Ratchet mechanism
- ▶ All cast iron structure
- ▶ Mounting – vertical P-base
- ▶ Corrosion resistance paint system
- ▶ Color – dark teal (Munsell 7.5BG 3/2)

Leads

	140T 180T	Up to 150HP		200HP and larger		320T And Below	360T And Above
		3600 (RPM)	1800/1200 (RPM)	3600 (RPM)	1800/1200 (RPM)		
Volt	230/460	230/460		460		575	
Lead	9	12	12	6	6	3	6
D.O.L.	YES	YES	YES	YES	YES	YES	YES
Y-Δ	N/A	YES	YES	YES	YES	N/A	YES
Part Winding	N/A	N/A	YES (230V)	N/A	N/A	N/A	N/A

Typical Nameplate Information

HARVEST		3-PHASE INDUCTION MOTOR NEMA PREMIUM EFFICIENCY					
HP	100	kW	75	MODEL NO.	HH1004UPA	ENCL.	TEFC
POLE	4	MAX. AMB.	40 °C	VOLTS	208-230/460	Hz	60
FRAME	405TP	TIME RATING	CONT.	AMP.	230/115		
INS. CLASS	F	DATE CODE		RPM	1775		
NEMA DES.	B	NOM. FL	95.4	SER. NO.			
NEMA CODE	G	EFF. (%)	3/4 F.L. 95.5 1/2 F.L. 95.0	BRG. D.E	6314ZZ		
S.F.	1.15	P.F.	0.85	NO. O.D.E	7222DT		
		USABLE AT	AMP.	IP	56	Wt.	1870 Lbs.
				EFF. LEVEL	IE3		



Vertical High-thrust Motor (TEFC)

Totally Enclosed Fan-Cooled, 3-Phase, 460V, 60Hz
NEMA Design B, Class F Insulation, Premium Efficiency,
40°C Ambient, Continuous Duty

Performance Data

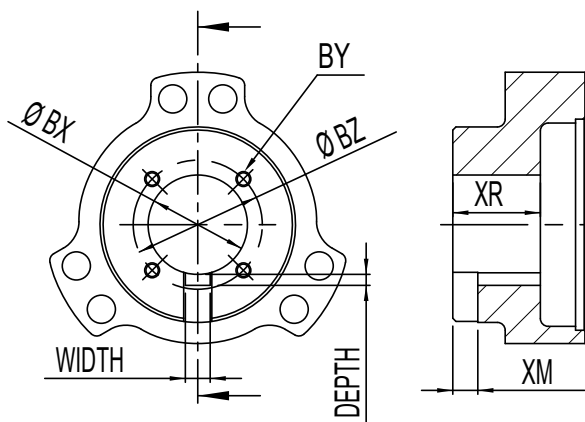
HP	Frame Size	Pole	Full Load RPM	Current (460V)		Efficiency (%)			Power Factor (%)			Torque			Max. Down Thrust (lbs)
				Full Load (A)	Locked Rotor (A)	100% Load	75% Load	50% Load	100% Load	75% Load	50% Load	Full Load (lb-ft)	Locked Rotor (%)	Break Down (%)	
5	213TP	2	3500	6.0	35	88.5	88.8	87.8	88.5	84.0	76.0	7.5	170	320	1800
5	213TP	4	1760	6.5	34	89.5	89.2	87.2	80.5	75.0	65.0	15.0	210	250	2300
5	215TP	6	1170	7.0	35	89.5	90.2	89.9	74.5	70.0	60.0	22.5	200	230	2600
7.5	213TP	2	3525	9.0	52	89.5	88.6	86.0	87.0	85.0	83.5	11.2	180	320	1800
7.5	213TP	4	1770	9.0	52	91.7	91.9	90.8	85.0	80.0	70.0	22.3	210	250	2250
7.5	254TP	6	1170	10.0	62	91.0	90.8	89.1	77.0	72.0	61.5	33.7	210	310	3750
10	215TP	2	3535	12.5	80	90.2	89.7	87.6	83.0	81.5	77.0	14.9	280	340	1750
10	215TP	4	1770	12.5	86	91.7	91.6	90.4	81.5	75.0	63.5	29.7	270	310	2250
10	256TP	6	1170	13.5	76	91.0	91.1	89.8	76.0	72.5	64.0	44.9	200	290	3700
15	254TP	2	3550	19.0	116	91.0	90.0	88.0	83.5	79.7	71.3	22.2	190	260	2550
15	254TP	4	1770	19.0	116	92.4	92.1	90.5	80.0	74.3	63.3	44.6	270	330	3200
15	284TP	6	1180	19.0	114	91.7	92.0	91.4	80.5	75.6	65.7	66.8	270	280	3600
20	256TP	2	3535	24.5	142	91.0	91.5	90.9	84.0	82.0	78.0	29.7	250	260	2500
20	256TP	4	1765	25.0	163	93.0	93.1	91.9	82.0	77.9	68.9	59.6	290	300	3150
20	286TP	6	1180	26.5	141	91.7	92.3	92.0	77.0	73.5	65.0	89.1	240	250	3550
25	284TP	2	3535	31.0	183	91.7	91.7	90.5	82.5	81.0	78.0	37.2	150	250	2500
25	284TP	4	1770	29.5	183	93.6	93.6	92.6	85.0	82.6	75.9	74.2	270	280	3100
25	324TP	6	1180	31.0	183	93.0	93.2	92.2	81.0	77.5	69.0	111	200	280	6450
30	286TP	2	3525	34.5	218	91.7	92.0	91.6	89.0	87.9	83.9	44.7	180	340	2450
30	286TP	4	1770	35.5	218	93.6	93.8	93.0	85.0	82.4	75.5	89.1	280	390	3250
30	326TP	6	1180	37.0	218	93.0	93.4	93.0	81.5	77.7	68.8	134	230	280	6400
40	324TP	2	3550	41.0	280	92.4	91.7	89.7	89.5	85.0	76.5	59.2	170	270	4400
40	324TP	4	1770	47.1	270	94.1	94.5	93.9	84.5	82.3	75.8	119	150	250	4500
40	364TP	6	1180	48.0	280	94.1	94.2	93.2	83.0	79.0	70.0	178	170	270	9300
50	326TP	2	3550	50.0	363	93.0	93.0	91.0	89.5	86.5	79.0	74.0	140	260	4350
50	326TP	4	1775	58.0	335	94.5	95.0	94.8	85.5	83.5	78.0	148	150	250	5500
50	365TP	6	1180	59.9	330	94.1	94.4	93.9	83.0	79.0	71.0	223	180	250	9250
60	364TP	2	3565	69.0	435	93.6	93.7	90.2	87.0	84.0	76.8	88.5	130	300	6400
60	364TP	4	1785	69.2	411	95.0	95.4	95.1	85.5	82.5	75.5	177	160	260	8050
60	404TP	6	1180	74.2	410	94.5	94.9	94.7	80.0	77.0	70.0	267	160	250	8250
75	365TP	2	3565	84.3	525	93.6	91.2	89.0	89.0	86.5	81.0	111	130	260	6350
75	365TP	4	1785	86.6	543	95.4	95.4	94.7	85.0	82.5	75.0	221	180	270	8000
75	405TP	6	1185	89.5	500	94.5	94.9	94.6	83.0	80.0	72.5	333	170	250	8200
100	405TP	4	1785	115	712	95.4	95.5	95.0	85.5	83.0	76.5	294	200	240	9200
100	444TP	6	1180	122	715	95.0	95.4	94.9	81.0	79.0	72.5	445	170	240	11050
125	444TP	4	1775	141	908	95.4	95.4	94.7	87.0	86.2	82.3	370	180	260	9150
125	445TP	6	1180	148	908	95.0	95.2	94.7	83.0	80.7	73.9	557	170	240	10550
150	445TP	4	1785	169	1085	95.8	96.0	95.6	86.5	85.0	81.0	442	180	260	9550
150	447TP	6	1185	177	1000	95.8	95.9	95.4	82.5	80.0	73.0	665	160	230	14500
200	447TP	4	1785	219	1450	96.2	96.4	96.0	89.0	88.8	85.6	589	130	240	11500
200	449TP	6	1185	233	1420	95.8	95.9	95.6	84.0	81.5	74.5	887	190	240	14000
250	449TP	4	1780	278	1825	96.2	96.5	96.3	87.5	86.6	82.5	738	140	240	11200
250	449TP	6	1185	292	1745	95.8	96.2	96.0	83.5	81.3	74.1	1109	180	230	13500
300	449TP	4	1785	331	2128	96.2	96.7	96.7	88.0	86.0	82.0	883	120	180	10900

* All data are subject to change without notice.

► Please contact us, if your need is beyond the range!!

- (1) Above data are typical values for reference only.
- (2) Maximum down thrust value are base on L10=8760 hours.
- (3) Higher thrust capacity available on request.
- (4) For current at 230V, multiply above values by 2.

Harvest Series



Coupling kits list

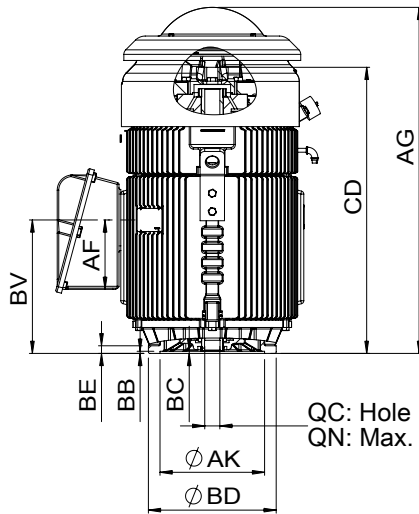
FRAME	COUPLING KITS NO.	BX	BY	BZ	XM	XR	KEYWAY	
							WIDTH	DEPTH
213~256TP	434-59233-96	0.751	10-32UNF	1.375	0.43	1.65	0.188	0.109
	434-59233-95	0.876					0.188	0.109
	*434-59233-91	1.001					0.25	0.14
	434-59233-92	1.188	1/4-20UNC	1.75			0.25	0.14
	434-59233-93	1.251					0.25	0.14
	434-59233-94	0.751 (BLANK COUPLING)	N/A	N/A	N/A	N/A	N/A	N/A
284TP~286TP	*434-59234-91	1.001	10-32UNF	1.375	0.43	1.85	0.25	0.14
	434-59234-92	1.188	1/4-20UNC	1.75			0.25	0.14
	434-59234-93	1.251					0.25	0.14
	434-59234-94	0.751 (BLANK COUPLING)	N/A	N/A	N/A	N/A	N/A	N/A
324TP~326TP	434-59235-91	1.001	10-32UNF	1.375	0.47	1.61	0.25	0.14
	434-59235-92	1.188	1/4-20UNC	1.75			0.25	0.14
	*434-59235-93	1.251					0.25	0.14
	434-59235-94	1.251					0.375	0.14
	434-59235-95	1.438	2.12				0.375	0.14
	434-59235-96	1.501					0.375	0.14
	434-59235-97	1.001 (BLANK COUPLING)	N/A	N/A	N/A	N/A	N/A	N/A
364TP~365TP	D34-01940-92	1.188	1/4-20UNC	1.75	0.47	1.48	0.25	0.14
	*D34-01940-93	1.251					0.375	0.14
	D34-01940-94	1.438					0.375	0.14
	D34-01940-95	1.501		2.12			0.375	0.14
	D34-01940-96	1.688		2.5			0.375	0.203
	D34-01940-97	1.751					0.375	0.203
	D34-01940-91	1.001 (BLANK COUPLING)	N/A	N/A	N/A	N/A	N/A	N/A
404TP~405TP	434-59237-91	1.188	1/4-20UNC	1.75	0.63	2.22	0.25	0.14
	*434-59237-92	1.501		2.12			0.375	0.14
	434-59237-93	1.688		2.5			0.375	0.203
	434-59237-94	1.751					0.375	0.203
	434-59237-95	1.938		0.375			0.203	
	434-59237-96	1.188 (BLANK COUPLING)	N/A	N/A	N/A	N/A	N/A	N/A
444TP~445TP	D34-07581-92	1.501	1/4-20UNC	2.125	0.63	6.67	0.375	0.168
	*D34-07581-93	1.688		2.5			0.375	0.171
	D34-07581-94	1.938		0.5			0.222	
	D34-07581-91	1.501 (BLANK COUPLING)	N/A	N/A	N/A	N/A	N/A	N/A
444TP~449TP	D34-02072-92	1.501	1/4-20UNC	2.125	0.63	2.2	0.375	0.14
	*D34-02072-93	1.688		2.5			0.375	0.203
	D34-02072-94	1.938					0.5	0.222
	D34-02072-95	2.001	3/8-16UNC	3.25			0.5	0.222
	D34-02072-96	2.188					0.5	0.226
	D34-02072-97	2.251					0.5	0.226
	D34-02072-91	1.501 (BLANK COUPLING)	N/A	N/A	N/A	N/A	N/A	N/A

* Standard size

DWG No.	D34-02771
REV.02	DATE 05/29/2019

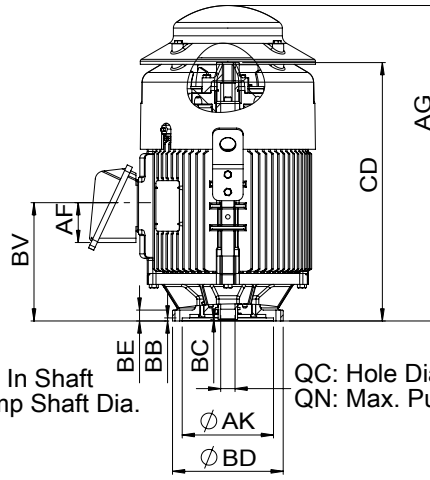
VHS TEFC-TP TYPE

▶ 324TP~449TP

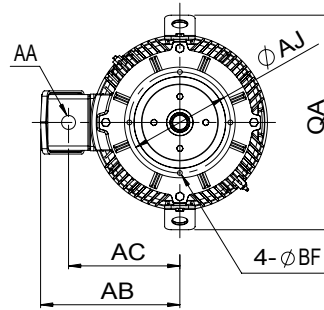
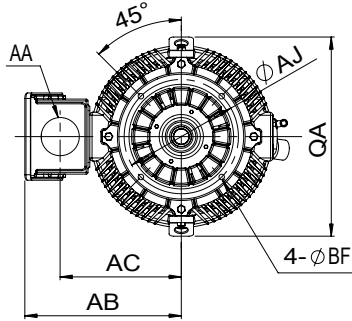


QC: Hole Dia. In Shaft
QN: Max. Pump Shaft Dia.

▶ 213TP~286TP



QC: Hole Dia. In Shaft
QN: Max. Pump Shaft Dia.



3RD ANGLE PROJECTION
DIMENSIONS IN INCHES

FRAME NO.	AA	AB	AC	AF	AG	AJ	AK	BB	BC	BD	FRAME NO.
213/5TP	NPT1"	10.19	8.11	2.83	24.61	9.125	8.25	0.26	0.25	10	213/5TP
254/6TP	NPT1.25"	12.59	10.23	3.93	28.5	9.125	8.25	0.28	0.12	10	254/6TP
284/6TP	NPT1.5"	15.33	11.85	4.33	29.45	9.125	8.25	0.28	0.31	12	284/6TP
324/6TP	NPT1.5"	16.35	12.83	4.33	32.56	14.75	13.5	0.28	0.28	16.5	324/6TP
364/5TP	NPT2.5"	18.58	15.39	6.81	40.37	14.75	13.5	0.28	0.35	16.5	364/5TP
404/5TP	NPT2.5"	20.4	16.45	8.96	44.67	14.75	13.5	0.28	0.35	16.5	404/5TP
444/5TP	NPT2.5"	20.59	16.45	8.96	48.21	14.75	13.5	0.28	0.35	16.5	444/5TP
447TP	NPT3.5"	22.17	18.22	8.96	52.66	14.75	13.5	0.28	0.35	16.5	447TP
449TP	NPT3.5"	22.17	18.22	8.96	57.66	14.75	13.5	0.28	0.35	20	449TP
FRAME NO.	BE	BF	BV	CD	QA	QC	QN	UPPER BEARING	LOWER BEARING	APPROX. WEIGHT (lbs)	FRAME NO.
213/5TP	0.67	0.43	8.73	20.25	17.8	1.125	1	7309B	6209ZZ	310	213/5TP
254/6TP	0.98	0.43	10.39	23.35	19.39	1.375	1.25	7311B	6309ZZ	480	254/6TP
284/6TP	0.98	0.43	10.59	24.75	21.43	1.375	1.25	7311B	6311ZZ	630	284/6TP
324/6TP	0.98	0.71	11.93	28.23	24.72	1.875	1.75	7219B	6312ZZ	1025	324/6TP
364/5TP	0.98	0.71	17.22	31.18	28.07	1.875	1.75	7319B	6314ZZ	1480	364/5TP
404/5TP	0.98	0.71	17.22	36.93	28.07	2	1.938	7222DT	6314ZZ	1870	404/5TP
444/5TP	0.98	0.71	19.98	40.31 ⁽¹⁾	29.92	2	1.938	7224DT	6218ZZ	2070	444/5TP
447TP	0.98	0.71	20.94	44.78	33.2	2.625	2.501	7230DT	6218ZZ	2880	447TP
449TP	0.98	0.71	23.44	49.78	33.2	2.625	2.501	7230DT	6218ZZ	3200	449TP

(1) With coupling kits D34-02072 : CD=40.31" ; With coupling kits D34-07581 : CD=44.78".

(2) Tolerance for AK=8.25" : 0"~0.003" ; Tolerance for AK=13.5" : 0"~0.005".

(3) All dimensions are subject to change without notice.

DWG No.	D34-02535
REV.02	DATE 05/29/2019



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 Units

Continuous Production since 1949

Voltage Range --- thru 13,800 Volts

Test Facility through 50,000HP --- IEEE 112 Method F1

Location --- 352 Shi-tong Rd., Sanhsia, New Taipei City 23743,
Taiwan

FRITZ™
AC DC POWER EST.1953