



**ELECTRIC FORKLIFT**

# LIFT TRUCKS

**SETTING INTERNATIONAL STANDARDS**



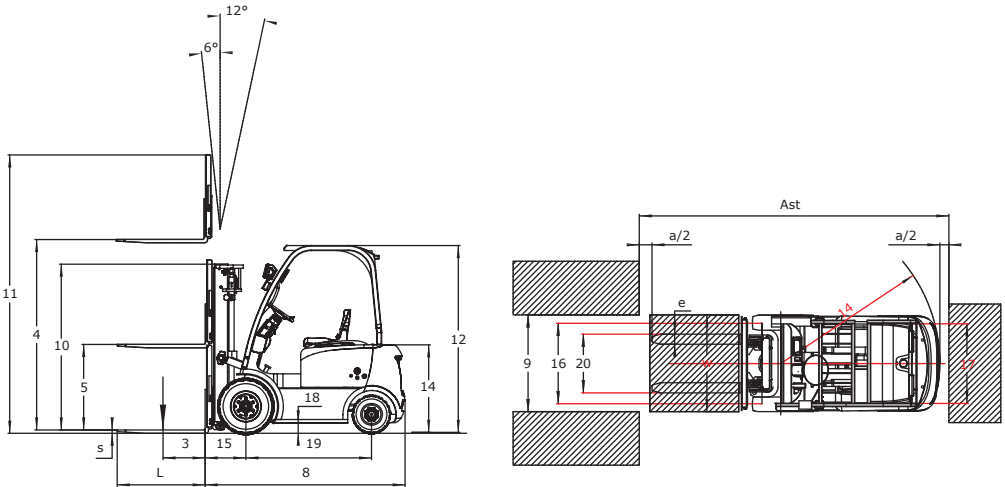
**4-WHEEL ELECTRIC FORKLIFT**



Web Site : [www.banngai.com](http://www.banngai.com)  
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"Pictured here with optional non marking tyres."

# Dimensions



\*Characters here refer to the Specification table on page 6-7 of this catalogue

Standard Features	Option
1 AC drive system	1 3 or 4 spools control valve
2 Front capacity storage battery	2 2.0-5.0m/79-197 inch duplex mast
3 Emergency disconnect switch	3 2.5-4.0m/98-157 inch full free duplex mast
4 Rubber floor mat	4 4.3-6.5m./169-256 inch triplex mast
5 High elastic seat	5 Special carriage and backrest
6 2 Spools control valve	6 Option fork
7 3 meters 2-stage mast	7 High capacity battery
8 Adjustable steering controlled	8 Rear combined LED lamp and front combined LED lamp
9 Rearview mirror	9 Special color
10 Drive, lift, steering controlled	10 Dual drive wheel with fender
11 Rear combined lamp	11 Solid tyre
12 Beeper	12 Non marking tyre
13 Toolbox and file folder	13 Cabin
14 Hour meter, self-diagnose indicator	14 Heater
	15 Side shifter
	16 Integrated side shifter
	17 Other attachment

# 1, Performance

## Drive Motor

- 1, Advanced AC drive motor has high traction power and driving dynamics, whether on uneven ground or when working on ramps.
- 2, The maintenance-free and highly efficient AC motor (dust and water jet protected) guarantees a long battery operating life.
- 3, Two independent, double heavy duty, drive unit gears are constantly lubricated in an oil bath, is quiet and reliable, thus providing years of trouble-free service.

## AC Controller (ZAPI-made in Italy)

- 1, Regenerative braking charges the battery, increasing stored power even while operating.
- 2, AC technology on traction and lifting allows the truck to work more reliably and for longer shifts.
- 3, The intelligent programmable LCD can display the fault code, keeping the operator and service engineer aware of any problems, speed up servicing and help prevent damage.

## Brake

- 1, Maintenance-free braking system makes braking safe, comfortable and durable.
- 2, Motor brake for regenerative braking during deceleration.
- 3, Automatically engaging parking brake for secure stopping, even on ramps.
- 4, Long service life of wet disc brake.

## Hydraulics

- 1, Powerful UK made AC hydraulic motor provides high torque for rapid but smooth-and controlled-lifting and lowering.

## Steering System

- 1, The main hydraulic pump delivers on-demand power steering only when steering is required, making for low battery consumption.
- 2, Two drive motors matches to the controller to deliver smooth steering at all angles, this helps the truck to accelerate, turn and manoeuvre even from a full turn start position.

## Mast

- 1, High strength steel mast sections with combined mast rollers are constructed for low mast deflection and high rigidity.
- 2, Cylinders are placed behind the rails to create a wide view.
- 3, Flow limiting control valves regulate carriage lowering speed, even in the event of a hose failure.
- 4, Full I-section mast channel provides maximum section strength.





## 2, Operability, Ergonomics & Safety

- 1, Spacious operator compartment.
- 2, Large steering wheel tilt angle adjustment.
- 3, Dual power steering motors ensures light operation.
- 4, Ergonomically designed control levers, situated closer to the operator for easy reach.
- 5, Logical layout of instrument panel enables the operator to easily be aware of the truck's status.
- 6, Roomy pedal area, long unique, low handrail design, enables the operator to mount and dismount easily and safely.
- 7, Ergonomically designed easy-grip handrail also makes it safer when reversing the truck.
- 8, Spacious and comfortable sports seat with side bolsters.
- 9, Large arc rear-view mirror with wide view.
- 10, Wide view mast increases operation efficiency.
- 11, Emergency stop button is right beside operator's hand, therefore it can be immediately cut off in shortest time.



# 3, Serviceability

- 1, Reasonable layout of driving motor, pump motor and brake pedal, optimized oil pipe arrangement and easily removed footrest, makes it easy to test, repair and replace.
- 2, Easily removed side frame cover of battery box, makes maintenance easier for the battery.
- 3, Easy access to brake fluid reservoir for replenishment when necessary.
- 4, The AC Drive Motor is brushless and highly reliable, therefore drastically reducing maintenance time and labour.
- 5, High quality American AMP connectors, prevents moisture and contaminants from interrupting truck operation in all environments, plus all the wires and cables are reliably protected and fixed this greatly reduces electrical error.
- 6, The pedal board opens without the need for tools making it easy to check the drive motor, cabling, hosing, etc.



# 4-Wheel Electric Forklift Specification ฟอรัคลิฟไฟฟ้า รุ่น 4 ล้อ

NO.

Specification				
1	Model รุ่น		EF15V	EF18V
2	Rated capacity ความจุ	kg	1500	1800
3	Load center จุดโหลด	mm	500	500
4	Lifting height ความสูงสูงสุดยก	mm	3000	3000
5	Free lifting height ระยะ free ของยก	mm	135	135
6	Fork size ขนาดงา	mm	40×80×920/1220	40×80×920/1220
7	Tilting angle องศาปรับองศา	Deg	5/10	5/10
Dimensions ขนาด				
8		Length to face of fork ความยาวงา	mm	2030
9		Width ความกว้างงา	mm	1080
10	Overall Dimension ขนาด	Height when mast lowered ความสูงของงา	mm	1995
11		Height when mast lifting ความสูงสูงสุดของงา	mm	3945
12		Height to safeguard ความสูงของโครงสร้าง	mm	2075
13		Height seat ความสูงของเบาะนั่ง	mm	1030
14	Turning radius รัศมีตัว	Min	mm	1750
15	Overhand ความยาวโครงสร้างยก	Front	mm	420
16/17	Tread(Front/Rear) ระยะจากล้อซ้าย-ขวา (หน้า/หลัง)		mm	920/900
18	Ground clearance ระยะระหว่างพื้นกับตัวรถ	Min	mm	110
19	Wheelbase ระยะระหว่างมุมล้อหน้า-หลัง		mm	1280
20	Fork spread ระยะการปรับงา	Min/max	mm	240/1000
21	Working aisle width with pallet(Ast) ขนาดที่ปฏิบัติงาน	crossways	mm	3560
22		lengthways	mm	3665
Performance				
23		Travel(Laden) ความเร็วการขับเคลื่อน(บรรทุก)	km/h	14
24		Travel( Unladen) ความเร็วการขับเคลื่อน(ไม่บรรทุก)	km/h	15
25	Speed ความเร็ว	Lifting(Laden) ความเร็วการยก(บรรทุก)	mm/s	300
26		Lifting(Unladen) ความเร็วการยก(ไม่บรรทุก)	mm/s	450
27		Lowing(Laden) ความเร็วการลดระดับงา(บรรทุก)	mm/s	450
28		Lowing(Unladen) ความเร็วการลดระดับงา(ไม่บรรทุก)	mm/s	440
29	Gradeability	Laden บรรทุก	%	10.5
30		Unladen ไม่บรรทุก	%	14
31	Max.Drawbar pull	Laden(S2 5min)	N	11000
32	Service weight น้ำหนัก	Include battery box น้ำหนักรวมแบตเตอรี่	kg	2900
33		Front×2 ล้อหน้า		6.5-10-10PR
34	Tyre ยาง	Rear×2 ล้อหลัง		5.00-8-10PR
				5.00-8-10PR
Driven				
35	Motor มอเตอร์	Driven motor×2 มอเตอร์ขับเคลื่อน	kw	8
36		Pump motor มอเตอร์ปั๊ม	kw	7.8
37	Battery แบตเตอรี่	standard แบตเตอรี่มาตรฐาน	V/AH	48/420(Max 48/500)
38	Battery weight include box (STD Battery)		kg	750
39	Controller ระบบการควบคุม	Type ชนิด		AC
40		Manufacturer ผู้ผลิต		ZAPI
41	Operating pressure for attachment แรงกดที่ติดตั้งอุปกรณ์เสริม		Mpa	14.5
42	Noise level ระดับเสียง		dB(A)	70

EF20V	EF25V	EF30V	EF35V
2000	2500	3000	3500
500	500	500	500
3000	3000	3000	3000
100	100	100	100
40×100×1070/1200	40×100×1070/1220	40×125×1070/1220	40×125×1070/1220
6/12	6/12	6/12	6/12
2385	2385	2600	2600
1150	1150	1280	1280
2040	2040	2185	2185
4030	4030	4220	4220
2170	2170	2230	2230
1050	1050	1050	1050
2100	2100	2300	2300
440	440	440	440
100	100	120	120
1500	1500	1625	1625
200/1000	200/1000	290/1000	290/1000
3750	3900	4070	4170
3850	4005	4180	4273
13	13	12	12
13.5	13.5	13	13
300	300	210	210
450	450	370	370
440	440	440	440
435	435	420	420
10.5	10.5	10.5	10.5
14	14	12	12
18000	18000	20000	20000
4320	4320	5500	5500
7.00-12-12PR	7.00-12-12PR	28X9-15	28X9-15
18X7-8	18X7-8	18X7-8	18X7-8
9.1	9.1	11	11
8.6	8.6	10	10
48/630(Max 48/700)	48/630(Max 48/700)	80/500(Max 48/600)	80/500(Max 48/600)
990	990	1492	1492
AC	AC	AC	AC
ZAPI	ZAPI	ZAPI	ZAPI
17.5	17.5	18	18
71	71	76	76

# 1.5-1.8t FV MAST CHART

## 1.5~1.8t FV series mast: (pneumatic)

Model รุ่น	Max. for height ความสูงขั้นต่ำจาก	Overall height ความสูงทั้งหมด			Free lift ระยะฟรีของงาต		Front Overhang ระยะห่างคานงากับศูนย์กลาง		Tilt range ระยะปรับองศา		Capacity ความจุ			
		Lowered	Extended		Without backrest	With backrest			FWD เติ้นหน้า	BWD ถอยหลัง	Load capacity at 500 mm ระยะจุดโหลดที่ 500 mm			
			Without backrest	With backrest							Single tire สัตเดี่ยว		Double tire สัตคู่	
		mm	mm	mm	mm	mm	mm	mm	Deg	Deg	1.5t	1.8t	1.5t	1.8t
<b>Wide view mast</b>														
2W200	2000	1495	2585	2955	120	120	420	420	6	12	1500	1800	1500	1800
2W250	2500	1745	3085	3455	120	120	420	420	6	12	1500	1800	1500	1800
2W270	2700	1845	3285	3655	120	120	420	420	6	12	1500	1800	1500	1800
2W300	3000	1995	3585	3955	120	120	420	420	6	12	1500	1800	1500	1800
2W330	3300	2145	3885	4255	120	120	420	420	6	12	1500	1800	1500	1800
2W350	3500	2245	4085	4455	120	120	420	420	6	12	1500	1800	1500	1800
2W360	3600	2295	4185	4555	120	120	420	420	6	12	1500	1800	1500	1800
2W400	4000	2545	4585	4955	120	120	420	420	6	12	1400	1600	1500	1800
2W430	4300	2695	4885	5255	120	120	420	420	6	6	1300	1500	1400	1600
2W450	4500	2795	5085	5455	120	120	420	420	6	6	1250	1400	1350	1500
<b>wide view full 2-stage mast</b>														
2F250	2500	1790	3105	3455	1045	765	420	420	6	12	1500	1800	1500	1800
2F270	2700	1890	3305	3655	1145	865	420	420	6	12	1500	1800	1500	1800
2F300	3000	2040	3605	3955	1345	1105	420	420	6	12	1500	1800	1500	1800
2F330	3300	2190	3905	4255	1495	1165	420	420	6	12	1500	1800	1500	1800
2F360	3600	2340	4205	4555	1645	1315	420	420	6	12	1500	1800	1500	1800
2F400	4000	2540	4605	4955	1815	1565	420	420	6	12	1400	1700	1500	1800
<b>wide view full 3-stage mast</b>														
3F430	4300	1965	5070	5255	1425	1080	440	440	6	6	1250	1450	1350	1550
3F450	4500	2045	5130	5465	1485	1140	440	440	6	6	1200	1350	1300	1450
3F480	4800	2160	5445	5755	1575	1230	440	440	6	6	1100	1250	1200	1350
3F500	5000	2210	5605	5955	1665	1320	440	440	6	6	1050	1150	1150	1250
3F550	5500	2375	6120	6455	1825	1480	440	440	3	6	/	/	950	1050
3F600	6000	2600	6695	6955	1975	1630	440	440	3	6	/	/	750	850

Note: With sideshifter minus 150Kg, with integral sideshifter minus 100Kg.



# 2.0-2.5t FV MAST CHART

## 2.0~2.5t FV series mast: (pneumatic)

Model รุ่น	Max. for height ความสูงขึงค้างจอด	Overall height ความสูงทั้งหมด			Free lift ระยะฟรีของงัด		Front Overhang ระยะห่างแขนงกับฐานยึดหน้า		Tilt range ระยะปรับองศา		Capacity ความจุ			
		Lowered	Extended		Without backrest	With backrest			FWD เดิหน้า	BWD ยอหลัง	Load capacity at 500 mm ระยะจุที่โหลดที่ 500 mm			
			Without backrest	With backrest			Single tire ยึดเดี่ยว				Double tire ยึดคู่			
		mm	mm	mm	mm	mm	mm	mm	mm	Deg	Deg	2.0t	2.5t	2.0t
<b>Wide view mast</b>														
2W200	2000	1585	2740	3420	120	120	440	440	6	12	2000	2500	2000	2500
2W250	2500	1725	3040	3720	120	120	440	440	6	12	2000	2500	2000	2500
2W270	2700	1825	3240	3920	120	120	440	440	6	12	2000	2500	2000	2500
2W300	3000	1995	3540	4220	120	120	440	440	6	12	2000	2500	2000	2500
2W330	3300	2145	3690	4370	120	120	440	440	6	12	2000	2500	2000	2500
2W350	3500	2245	3890	4570	120	120	440	440	6	12	2000	2500	2000	2500
2W360	3600	2295	3990	4670	120	120	440	440	6	12	2000	2500	2000	2500
2W400	4000	2495	4040	4720	120	120	440	440	6	12	1900	2300	2000	2500
2W430	4300	2645	4340	5020	120	120	440	440	6	6	1800	2100	1950	2450
2W450	4500	2745	4290	4970	120	120	440	440	6	6	1700	2000	1900	2400
<b>wide view full 2-stage mast</b>														
2F250	2500	1800	2090	2770	1210	560	440	440	6	12	2000	2500	2000	2500
2F270	2700	1900	2290	2970	1310	660	440	440	6	12	2000	2500	2000	2500
2F300	3000	2050	2590	3270	1460	810	440	440	6	12	2000	2500	2000	2500
2F330	3300	2200	3840	4520	1610	960	440	440	6	12	2000	2500	2000	2500
2F360	3600	2350	4140	4820	1760	1110	440	440	6	12	2000	2500	2000	2500
2F400	4000	2550	4540	5220	2060	1410	440	440	6	12	1900	2300	2000	2500
<b>wide view full 3-stage mast</b>														
3F430	4300	1970	4240	4880	1360	730	440	440	6	6	1700	2000	1900	2400
3F450	4500	2050	5720	5040	1460	810	460	460	6	6	1600	1900	1800	2300
3F480	4800	2095	6020	5345	1565	915	460	460	6	6	1500	1700	1700	2100
3F500	5000	2240	6220	5540	1610	960	460	460	6	6	1400	1600	1600	2000
3F550	5500	2320	6800	6120	1770	1120	460	460	3	6	1050	1200	1500	1800
3F600	6000	2740	7220	6540	2020	1370	460	460	3	6	700	800	1400	1600

Note: With sideshifter minus 150Kg, with integral sideshifter minus 100Kg.

# 3.0-3.5t FV MAST CHART

# 3.0-3.5t FV MAST CHART

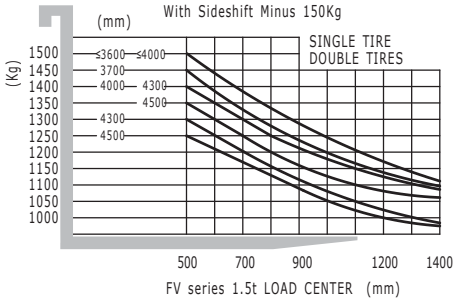
3.0-3.5t FV series mast: (pneumatic)

3.0-3.5t FV series mast: (pneumatic)

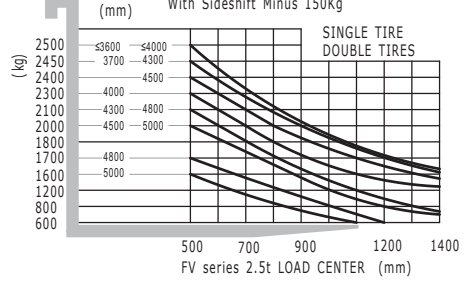
Model รุ่น	Max. for height ความสูงขั้วตั้งเสา	Overall height ความสูงทั้งหมด				Free lift ระยะฟรีของงัด		Front Overhang ระยะห่างแขวงกับศูนย์กลางหน้า		Tilt range ระยะปรับมุมองศา		Capacity ความจุ			
		Lowered	Extended		Without backrest	With backrest	3.0t	3.5t	FWD เติมน้ำมัน	BWD ถอดถัง	Load capacity at 500 mm ระยะจุดโหลดที่ 500 mm				
			Without backrest	With backrest							Single tire สัปดาห์		Double tire สัปดาห์		
		mm	mm	mm	mm	mm	mm	mm	mm	Deg	Deg	kg	kg	kg	kg
<b>Wide view mast</b>		<b>Wide view mast</b>													
2W200	2000	1520	2570	3250	120	120	440	440	6	12	3000	3500	3000	3500	
2W250	2500	1770	3070	3750	120	120	440	440	6	12	3000	3500	3000	3500	
2W270	2700	1875	3270	3950	120	120	440	440	6	12	3000	3500	3000	3500	
2W300	3000	2025	3570	4250	120	120	440	440	6	12	3000	3500	3000	3500	
2W330	3300	2145	3690	4370	120	120	440	440	6	12	3000	3500	3000	3500	
2W350	3500	2245	3890	4570	120	120	440	440	6	12	3000	3500	3000	3500	
2W360	3600	2295	3990	4670	120	120	440	440	6	12	3000	3500	3000	3500	
2W400	4000	2495	4040	4720	120	120	440	440	6	12	2850	3250	3000	3500	
2W430	4300	2645	4340	5020	120	120	440	440	6	6	2700	3000	2900	3400	
2W450	4500	2745	4290	4970	120	120	440	440	6	6	2550	2850	2850	3350	
<b>wide view full 2-stage mast</b>		<b>wide view full 2-stage mast</b>													
2F250	2500	1830	2220	2900	1210	560	440	440	6	12	3000	3000	3000	3000	
2F270	2700	1930	2320	3000	1310	660	440	440	6	12	3000	3000	3000	3000	
2F300	3000	2080	2620	3300	1460	810	440	440	6	12	3000	3500	3000	3500	
2F330	3300	2230	3870	4550	1610	960	440	440	6	12	3000	3500	3000	3500	
2F360	3600	2380	4020	4700	1760	1110	440	440	6	12	3000	3500	3000	3000	
2F400	4000	2580	4420	5100	2060	1410	440	440	6	12	2850	2850	3000	3000	
<b>wide view full 3-stage mast</b>		<b>wide view full 3-stage mast</b>													
3F430	4300	2000	5570	4910	1360	730	460	460	6	6	2550	2550	2850	3350	
3F450	4500	2080	5750	5070	1460	810	460	460	6	6	2400	2400	2700	3200	
3F480	4800	2125	6050	5375	1565	915	460	460	6	6	2250	2250	2550	2900	
3F500	5000	2270	6250	5570	1610	960	460	460	6	6	2100	2100	2400	2750	
3F550	5500	2350	6830	6150	1770	1120	460	460	3	6	1650	1650	2250	2550	
3F600	6000	2770	7250	6570	2020	1370	460	460	3	6	1200	1200	2100	2300	

Note: With sideshifter minus 200Kg, with integral sideshifter minus 150Kg.

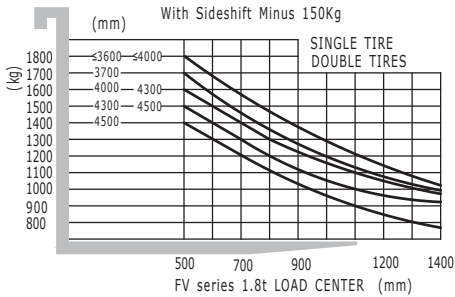
### LOAD CAPACITY CHART



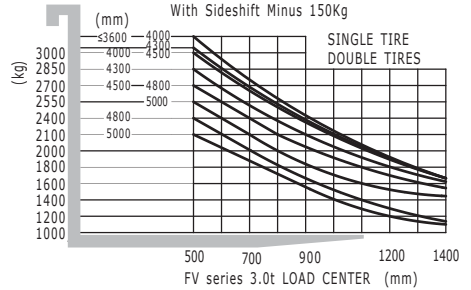
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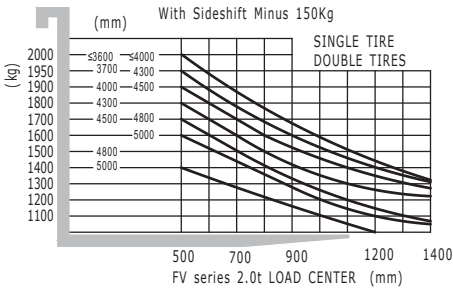
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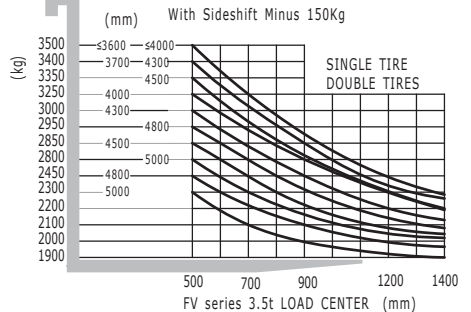
### LOAD CAPACITY CHART



### LOAD CAPACITY CHART



### LOAD CAPACITY CHART





## 4-WHEEL ELECTRIC FORKLIFT

❖ Web Site : [www.banngai.com](http://www.banngai.com)  
[www.superform.com.my](http://www.superform.com.my)



# BAN NGAI ENGINEERING SDN BHD (192894-T) BAN NGAI ENGINEERING (THAILAND) LTD.



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