

FBN Series

Electric Counterbalance • 4 Wheel Pneumatic Tyres
48 Volt AC Power • **1.6 - 2.0 tonnes**

**Fast, powerful and manoeuvrable...
for all the performance you'll ever need**

Developed from an award-winning design, but now powered by state-of-the-art AC motors, these compact four wheel electrics offer the strength and speed of a diesel... but without the noise and emissions. Suited to both indoor and outdoor use, their combination of high performance, manoeuvrability and ergonomic design delivers exceptional productivity in every situation.

The many benefits of AC power include smooth, quiet and controlled operation. For extra flexibility, an advanced controller allows this truck to be programmed, instantly, to meet the needs of each driver and application. Operating costs are minimised thanks to the truck's tremendous energy efficiency, low maintenance requirements and 500-hour service interval.

Frame and body

- **Compact dimensions** – together with responsive steering and high stability – allow excellent manoeuvrability and high productivity, however tight the space or uneven the ground.
- **Low centre of gravity** means stable, safe operation..
- **Curved overhead guard** – with specially shaped cross-sectional profile – gives better strength and protection, and allows quick, easy, secure fitting of cabin panels..

Mast and fork assembly

- **Exceptional visibility** – through the revolutionary high-strength, clear-view mast – maximises driver safety and output.
- **Square fork bar structure** minimises obstruction of driver's view.
- **Unique cross member design** combines excellent torsion strength – at all heights – with clear view.
- **Standard backrest** aids load stability



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Characteristics						
1.1	Manufacturer (abbreviation)			Mitsubishi	Mitsubishi	Mitsubishi
1.2	Manufacturer's model designation			FB16N	FB18N	FB20CN
1.3	Power source: (battery, diesel, LP gas, petrol)			Electric	Electric	Electric
1.4	Operator type: pedestrian, (operator)-standing, -seated			Seated	Seated	Seated
1.5	Load capacity	Q	(kg)	1.600	1.800	2.000
1.6	Load centre distance	c	(mm)	500	500	500
1.8	Load distance, axle to fork face	x	(mm)	376	376	387
1.9	Wheelbase	y	(mm)	1360	1360	1463
Weight						
2.1	Truck weight, without load / including battery (simplex mast, lowest lift height)		kg	3190	3280	3470
2.2	Axle loading with maximum load, front/rear (simplex mast, lowest lift height)		kg	4165/625	4490/590	4665/805
2.3	Axle loading without load, front/rear (simplex mast, lowest lift height)		kg	1535/1655	1530/1750	1450/2020
Wheels, Drive Train						
3.1	Tyres: V=solid, L=pneumatic, SE=solid pneumatic - front/rear			SE / SE	SE / SE	SE / SE
3.2	Tyre dimensions, front			18 x 7-8	18 x 7-8	200 / 50-10
3.3	Tyre dimensions, rear			16 x 6-8	16 x 6-8	16 x 6-8
3.5	Number of wheels, front/rear (x=driven)			2x / 2	2x / 2	2x / 2
3.6	Track width (centre of tyres), front	b10	(mm)	913	913	935
3.7	Track width (centre of tyres), rear	b11	(mm)	898	898	898
Dimensions						
4.1	Mast tilt, forwards/backwards	α/β	°	6° / 7°	6° / 7°	6° / 7°
4.2	Height with mast lowered (see tables)	h1	(mm)	2105	2105	2105
4.3	Free lift (see tables)	h2	(mm)	80	80	80
4.4	Lift height (see tables)	h3	(mm)	3265	3265	3265
4.5	Overall height with mast raised	h4	(mm)	4332	4332	4332
4.7	Height to top of overhead guard	h6	(mm)	2048	2048	2048
4.8	Seat height	h7	(mm)	973	973	973
4.12	Tow coupling height	h10	(mm)	410	410	410
4.19	Overall length	l1	(mm)	2994	2994	3108
4.20	Length to fork face (includes fork thickness)	l2	(mm)	2074	2074	2188
4.21	Overall width	b1/b2	(mm)	1070	1070	1130
4.22	Fork dimensions (thickness, width, length)	s / e / l	(mm)	35x100x920	35x100x920	35x100x920
4.23	Fork carriage to DIN 15 173 A/B/no			2A	2A	2A
4.24	Fork carriage width	b3	(mm)	920	920	920
4.31	Ground clearance under mast, with load	m1	(mm)	75	75	75
4.32	Ground clearance at centre of wheelbase, with load (forks lowered)	m2	(mm)	100	100	100
4.33	Working aisle width with 1000 x1200 mm pallets, crosswise	Ast	(mm)	3386	3386	3497
4.34	Working aisle width with 800 x1200 mm pallets, crosswise	Ast	(mm)	3186	3186	3297
4.35	Turning circle radius	Wa	(mm)	1810	1810	1910
4.36	Minimum distance between centres of rotation	b13	(mm)	563	563	563
Performance						
5.1	Travel speed, with/without load		km/h	17/17	17/17	17/17
5.2	Lifting speed, with/without load		m/s	0.5/0.6	0.44/0.6	0.4/0.6
5.3	Lowering speed, with/without load		m/s	0.52/0.5	0.52/0.5	0.52/0.5
5.5	Rated drawbar pull, with/without load		N	4896/5366	4812/5341	4757/5286
5.6	Maximum drawbar pull, with/without load (5 min short duty)		N	13714/14184	13630/14159	13575/14104
5.7	Gradeability, with/without load		%	13/22	13/22	13/22
5.8	Maximum gradeability, with/without load		%	27/35	25/35	24/35
5.9	Acceleration time (10 metres) with/without load		s	4.4/4.0	4.4/4.0	4.5/4.1
5.10	Service brakes (mechanical/hydraulic/electric/pneumatic)			Mech./hydr.	Mech./hydr.	Mech./hydr.
Electric motors						
6.1	Drive motor capacity (60 min. short duty)		kW	5.0x2	5.0x2	5.0x2
6.2	Lift motor output at 15% duty factor		kW	14	14	14
6.3	Battery to DIN 43 531/35/36 A/B/C/no			-	-	-
6.4	Battery voltage/capacity at 5-hour discharge		V /Ah	48 V 600Ah	48 V 600Ah	48V 720Ah
6.5	Battery weight		kg	865	865	1000
6.6	Energy consumption according to VDI 60 cycle		kWh/h	-	-	-
Miscellaneous						
8.1	Type of drive control			Impulse /AC	Impulse /AC	Impulse /AC
8.2	Maximum operating pressure for attachments		bar	181	181	181
8.3	Oil flow for attachments		l/min	-	-	-
8.4	Noise level, value at operator's ear (EN 12053)		dB(A)	69.1	69.1	69.1
8.5	Towing coupling design / DIN type, ref.					

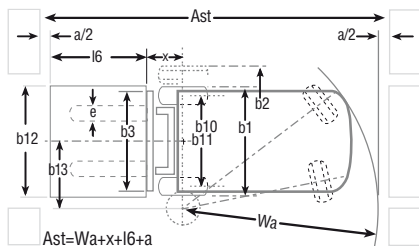
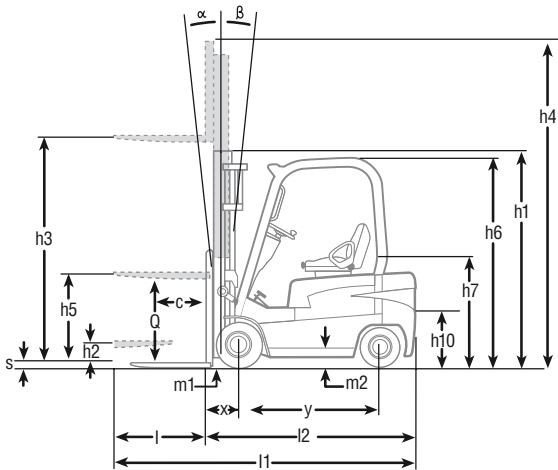
Mast Performance and Capacity

Mast Type	FB16N • FB18N • FB20CN				FB16N	FB18N	FB20CN
	h3 mm	h1 mm	h4 mm	h2 / h5 mm	Q @ c=500 mm kg	Q @ c=500 mm kg	Q @ c=500 mm kg
Simplex	2000	1460*	3045	80	1600	1800	2000
	2560	1740*	3605	80	1600	1800	2000
	2760	1840*	3805	80	1600	1800	2000
	3000	1960*	4045	80	1600	1800	2000
	3290	2105	4335	80	1600	1800	2000
	3720	2365	4765	80	1600	1800	2000
	4090	2550	5135	80	1600	1800	2000
	4480	2755	5525	80	1600	1775	2000
	5000	3015	6045	80	1600	1700	2000
	5500	3265	6545	80	1550	1650	1850
6000	3515	7045	80	1100	1275	1600	
Duplex	3000	1960*	4045	915	1600	1800	2000
	3295	2105	4340	1060	1600	1800	2000
	3700	2365	4745	1320	1600	1800	2000
	4030	2550	5075	1505	1600	1800	2000
Triplex	3710	1760*	4755	715	1600	1800	2000
	4010	1860*	5055	815	1600	1800	2000
	4310	1960*	5355	915	1600	1800	2000
	4750	2105	5795	1060	1550	1725	1950
	5090	2225	6135	1180	1500	1675	1900
	5490	2365	6535	1320	1400	1625	1850
	5990	2550	7035	1505	1100	1300	1600
	6490	2810	7535	1765	775	950	1300
7000	3015	8045	1970	500	675	1000	

Battery Compartment		FB16N	FB18N	FB20CN
Length (min)	mm	531	531	634
Width (min)	mm	1016	1016	1016
Height (min)	mm	650	650	650
Minimum Weight (48V)	kg	865	865	1000

(Consult your distributor for the maximum back tilt allowed to obtain the capacities specified)

* lower than overhead guard



A_{st} = Working aisle width with load
 a = Safety clearance (200 mm)
 l_6 = Pallet length (800 or 1000 mm)
 b_{12} = Pallet width (1200 mm)

h_1 Height with mast lowered
 h_2 Standard free lift
 h_3 Lift height
 h_4 Height with mast raised
 h_5 Full free lift
 Q Lifting capacity, rated load
 c Load centre (distance)



when
reliability
is **everything**

Developed for outstanding performance and genuine value for money, the awardwinning* range of Mitsubishi forklift trucks and warehouse equipment is built to a higher specification to maximize productivity and ensure utter reliability... whatever the application.

It's what you'd expect from one of the world's largest corporations whose companies are at the leading edge of technologies where performance, quality and dependability can never be compromised.

It means that, from a single safe source, we can meet 98% of all handling requirements, supplied to you via a range of competitive finance options including outright purchase, rental or leasing. So your local dealer can advise you on precisely the right product for your application... and your budget.

Moreover, because we understand how much you depend on your Mitsubishi forklift truck, we deliver the highest levels of customer support.

Through a network of carefully selected dealerships, we provide quality maintenance and customer care programmes including a choice of warranties that give complete peace of mind. Every dealership holds extensive stocks of manufacturer-approved parts, backed by a central store that holds literally millions of items constantly in stock and achieves a first-pick fulfilled rate of 97%. So your truck can be fixed first time, virtually every time.

* Mitsubishi Forklift Trucks has won **four** separate Fork Lift Truck Association Annual Awards for Excellence covering the areas of **Ergonomics**, the **Environment** and **Innovation**.

Drive

- **Powerful AC drive motor** provides high torque – even at fast speeds – for rapid acceleration, great ramp performance and smooth, quiet, controlled operation.
- **Controlled rolldown** – and outstanding ramp performance – allows safe and efficient operation on gradients.
- **High energy efficiency of AC motors** – together with highly efficient energy recycling through strong regenerative braking – means longer shifts and less recharging.

Steering system

- **Hydrostatic power steering** means smooth, precise control with minimal effort, whatever the truck's speed.
- **Power from hydraulic system** – eliminates need for separate steering motor – reducing noise and maintenance requirements.

Brakes

- **High-quality brake pad material and design** reduces noise, wear and brake fade.
- **Highly efficient regenerative braking** means effective control and reduced brake wear.

Hydraulics

- **Powerful AC hydraulic motor** provides high torque for rapid but smooth – and controlled – lifting and lowering.

Electrical and control systems

- **New generation control system** adjusts acceleration, travel speed, lift/lower speed and braking to suit the load, application and driver – for great versatility.
- **Performance setting** – including pre-set modes – allows instant programming without special tools.
- **PDA or laptop connection to control system** allows great refinement in programming and data analysis.
- **On-board diagnostics and fault memory folder** keep operator and service engineer aware of any problems, speed up servicing and help prevent damage.
- **Integrated Presence System** provides a parking brake alarm, a seat belt warning light and a hydraulic and travel interlock system for added safety.

Operator compartment and controls

- **Ergonomic operator compartment** – equipped with adjustable steering column, optional fingertip hydraulic control unit and other carefully positioned controls – reduces driver fatigue and increases precision.
- **Full-suspension, fully adjustable seat** – with hip restraints and belt – keeps driver safe, comfortable and alert through the longest of shifts.

Other features

- **Long service interval** – 500 hours – and lower maintenance requirements of AC motors, brakes, CAN-bus electrical system and other components reduces downtime and bills.
- **Rapid access features** – including improved access to electrical system and controllers – give quick and easy entry to all areas for checks and maintenance.

Options

- **Latest generation fingertip controls with adjustable armrest**
- **Strobe light**
- **Integral side shifter**
- **Range of tyres**



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NOTE: Performance specifications may vary depending on standard manufacturing tolerances, vehicle condition, types of tyres, floor or surface conditions, applications or operating environment. Trucks may be shown with non-standard options. Specific performance requirements and locally available configurations should be discussed with your distributor of Mitsubishi forklift trucks. Mitsubishi follows a policy of continual product improvement. For this reason, some materials, options and specifications could change without notice.