FB13TCB
FB15TCB
FB16TCB
FB18TCB
FB20TCB
FB16TBCB
FB18TBCB
FB20TBCB

FB13-20TCB Series

Electric Counterbalance • 3 Wheel Pneumatic Tyres

48 Volt AC Power • **1.3 – 2.0 tonnes**

High on efficiency... low on cost

Energy efficient, dependable and easy to maintain, this versatile series of three wheel electrics will give you high productivity with low costs. Powerful AC drive and hydraulic motors, on-demand electric power steering, a comfortable cabin and ergonomic controls ensure optimum output from your operator. Meanwhile, downtime and expense are minimised by low-maintenance systems and components.

The Mitsubishi FBTCB series offers a choice of four capacities, from 1.3 to 2.0 tonnes, and each model can be quickly programmed to meet a variety of needs. More specialised needs can be met by a complete range of optional features.

Frame and body

- **Compact dimensions** *ensure easy operation in confined spaces.*

Mast and fork assembly

- **Exceptional visibility** – *through the high-strength, clear-view mast – maximises driver safety and output.*
- **Mast cushioning** *ensures smooth, quiet lowering of loads.*
- **Backrest** *is fitted as standard to aid load stability.*

Drive

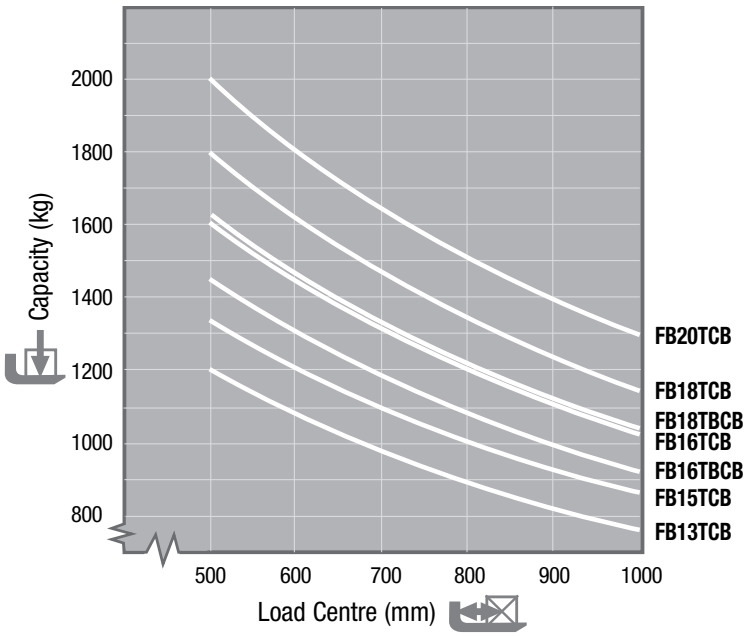
- **Powerful AC drive motor** *provides high torque – even at fast speeds – for rapid acceleration, great ramp performance and smooth, quiet, controlled operation.*
- **Controlled roll-down** *together with outstanding ramp performance allows safe and efficient operation on gradients.*

MITSUBISHI FORKLIFT TRUCKS

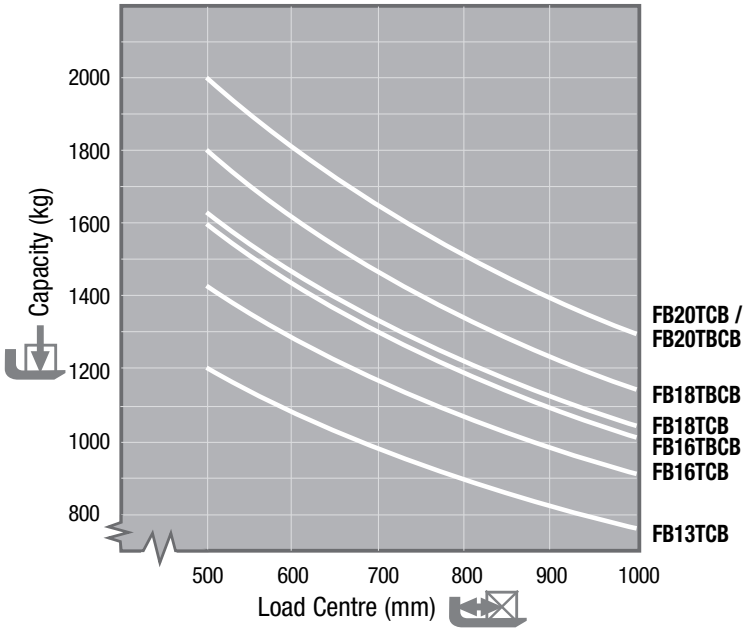
FB13-20TCB Models

Capacities at various load centres

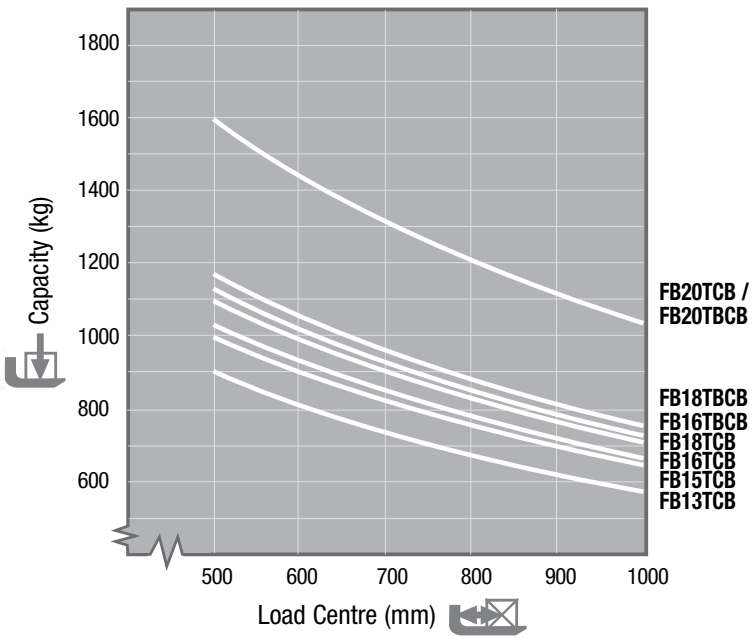
Simplex - h3 = 4000 mm

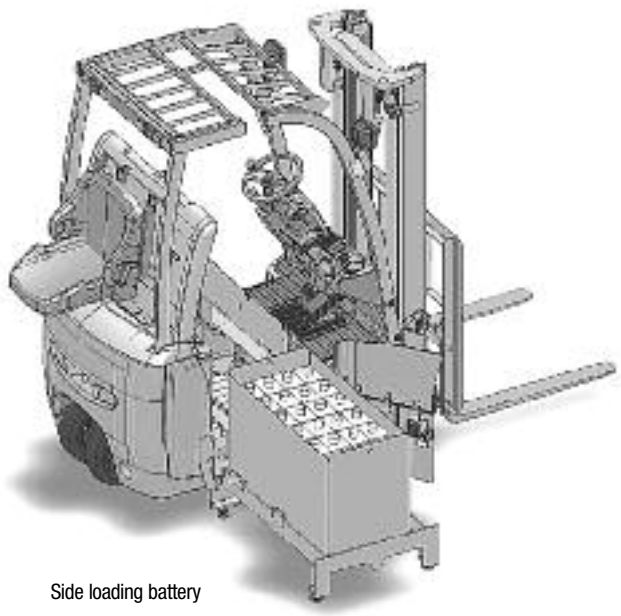


Duplex - h3 = 5000 mm



Triplex - h3 = 5500 mm





Side loading battery

FB13-20TCB Series

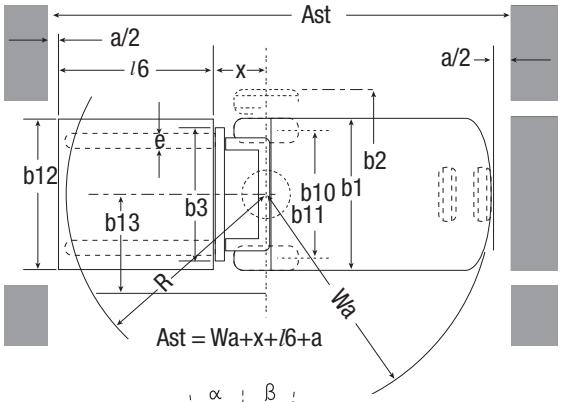
Electric Counterbalance

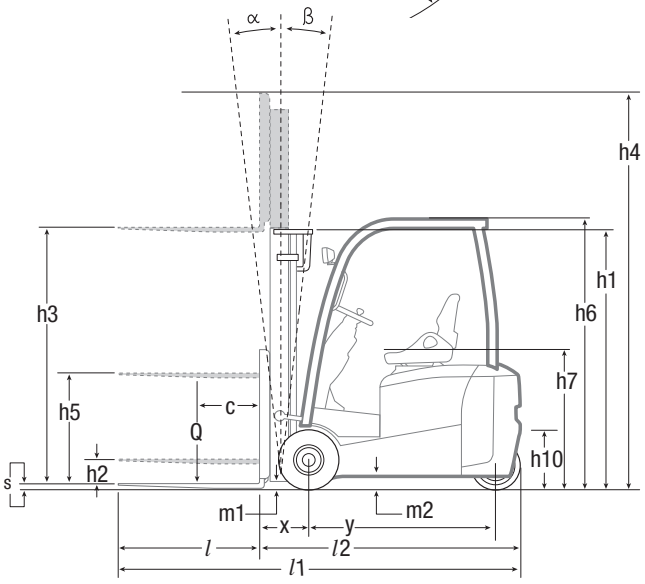
48 Volt AC Power • **1.3 – 2.0 tonnes**

	Characteristics						
1.1	Manufacturer (abbreviation)			Mitsubishi	Mitsubishi	Mitsubishi	
1.2	Manufacturer's model designation			FB13TCB	FB15TCB	FB16TCB	
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	1300	1500	1600	
1.6	Load centre distance	c	(mm)	500	500	500	
1.8	Load distance, axle to fork face	x	(mm)	375	375	375	
1.9	Wheelbase	y	(mm)	1220	1320	1415	
	Weights						
2.1	Truck weight, without load / including battery (simplex mast, lowest lift height)		kg	2625	2700	2675	
2.2	Axle loading with maximum load, front/rear (simplex mast, lowest lift height)		kg	3460/465	3735/455	3820/445	
2.3	Axle loading without load, front/rear (simplex mast, lowest lift height)		kg	1230/1395	1245/1445	1235/1430	
	Wheels and Tyres						
3.1	Tyres: V=solid, L=pneumatic, SE=solid pneumatic - front/rear			L / L	L / L	L / L	
3.2	Tyre dimensions, front		(mm)	18×7-8-14PR	18×7-8-14PR	18×7-8-16PR	
3.3	Tyre dimensions, rear		(mm)	15×4 1/2-8-12PR	15×4 1/2-8-12PR	15×4 1/2-8-12PR	
3.5	Number of wheels, front/rear (x=driven)		(mm)	2x / 2	2x / 2	2x / 2	
3.6	Track width (centre of tyres), front	b10	(mm)	920	920	920	
3.7	Track width (centre of tyres), rear	b11	(mm)	250	250	250	
	Dimensions						
4.1	Mast tilt, forwards/backwards	α/β	°	5 / 7.5	5 / 7.5	5 / 7.5	
4.2	Height with mast lowered (see tables)	h1	(mm)	1975	1975	1975	
4.3	Free lift (see tables)	h2	(mm)	115	115	115	
4.4	Lift height (see tables)*	h3	(mm)	3000	3000	3000	
4.5	Overall height with mast raised	h4	(mm)	4015	4015	4015	
4.7	Height to top of overhead guard	h6	(mm)	2050	2050	2050	
4.8	Seat height	h7	(mm)	955	955	955	
4.12	Tow coupling height	h10	(mm)	575	575	575	
4.19	Overall length	/1	(mm)	2855	2955	3050	
4.20	Length to fork face (includes fork thickness)	/2	(mm)	1785	1885	1980	
4.21	Overall width	b1 / b2	(mm)	1090	1090	1090	
4.22	Fork dimensions (thickness, width, length)	s / e / l	(mm)	35×100×1070	35×100×1070	35×100×1070	
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)	85	85	85	
4.32	Ground clearance at centre of wheelbase, with load (forks lowered)	m2	(mm)	85	85	85	
4.33	Working aisle width with 1000 × 1200 mm pallets, crosswise	Ast	(mm)	3110	3210	3305	
4.34	Working aisle width with 800 × 1200 mm pallets, lengthwise	Ast	(mm)	3235	3335	3430	
4.35	Turning circle radius	Wa	(mm)	1410	1510	1605	
4.36	Minimum distance between centres of rotation	b13	(mm)	0	0	0	
	Performance						
5.1	Travel speed, with/without load		km/h	15 / 16.5	15 / 16.5	14.5 / 16.0	
5.2	Lifting speed, with/without load		m/s	0.40 / 0.61	0.38 / 0.61	0.36 / 0.61	
5.3	Lowering speed, with/without load		m/s	0.55 / 0.50	0.55 / 0.50	0.55 / 0.50	
5.5	Rated drawbar pull, with/without load. Towing operation is prohibited		N	N/A / 3180	N/A / 3120	N/A / 3080	
5.6	Maximum drawbar pull, with/without load (3 min. short duty)		N	N/A / 7530	N/A / 7390	N/A / 6910	
5.7	Gradeability, with/without load		%	8/13	7.5/12.5	7/12.5	
5.8	Maximum gradeability, with/without load		%	20/20	18/20	15/20	
5.9	Acceleration time (10 metres) with/without load		s	4.7/4.2	4.7/4.0	4.7/4.1	
5.10	Service brakes (mechanical/hydraulic/electric/pneumatic)			Hydraulic	Hydraulic	Hydraulic	
	Motors						
6.1	Drive motor capacity (60 min. short duty)		kW	2 × 4.5	2 × 4.5	2 × 4.5	
6.2	Lift motor output at 15% duty factor		kW	9.5	9.5	9.5	
6.3	Battery to DIN 43 531/35/36 A/B/C/no			- BS/JS	- BS/JS	- BS/JIS	
6.4	Battery voltage/capacity at 5-hour discharge		V / Ah	48 / 340	48 / 350	48 / 350	
6.5	Battery weight		kg	550	595	595	
6.6	Energy consumption according to VDI 60 cycle		kWh / h	N/A	N/A	N/A	
	Miscellaneous						
8.1	Type of drive control			FET	FET	FET	
8.2	Maximum operating pressure for attachments		bar	137	137	157	
8.3	Oil flow for attachments		l/min	60	60	60	
8.4	Noise level, value at operator's ear (EN 12053)		dB(A)	< 75	< 75	< 75	
8.5	Towing coupling design / DIN type, ref.			N/A	N/A	N/A	

* excluding fork thickness

	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi
	FB18TCB	FB20TCB	FB16TBCB	FB18TBCB	FB20TBCB
	Electric	Electric	Electric	Electric	Electric
	Seated	Seated	Seated	Seated	Seated
	1800	2000	1600	1800	2000
	500	500	500	500	500
	375	415	375	375	415
	1415	1415	1525	1525	1525
	2870	2345	3050	3300	3405
	4155/515	4650/595	4020/630	4315/785	4815/590
	1245/1625	1355/1890	1505/1545	1485/1815	1615/1790
	L / L	SE / L	L / L	L / L	SE / L
	18×7-8-16PR	18×7-8 (N.P.)*	18×7-8-16PR	18×7-8-16PR	18×7-8 (N.P.)*
	16×6-8-10PR	16×6-8-10PR	15×4 1/2-8-12PR	16×6-8-10PR	16×6-8-10PR
	2x / 2	2x / 2	2x / 2	2x / 2	2x / 2
	920	920	920	920	920
	230	230	250	230	230
	5 / 7.5	5 / 7.5	5 / 7.5	5 / 7.5	5 / 7.5
	1975	1975	1975	1975	1975
	115	120	115	115	120
	3000	3000	3000	3000	3000
	4015	4000	4015	4015	4000
	2050	2050	2050	2050	2050
	955	955	955	955	955
	575	575	575	575	575
	3105	3175	3160	3215	3255
	2035	2105	2090	2145	2185
	1090	1090	1090	1090	1090
	35×100×1070	40×122×1070	35×100×1070	35×100×1070	40×122×1070
	2A	2A	2A	2A	2A
	920	1000	920	920	1000
	85	85	85	85	85
	85	85	85	85	85
	3360	3430	3415	3470	3507
	3485	3555	3540	3595	3635
	1660	1690	1715	1770	1770
	0	0	0	0	0
	14.5 / 16	14 / 15.5	14.5 / 16.0	14.5 / 16.0	14 / 15.5
	0.36 / 0.61	0.30 / 0.50	0.36 / 0.61	0.36 / 0.61	0.30 / 0.50
	0.55 / 0.50	0.55 / 0.50	0.55 / 0.50	0.55 / 0.50	0.55 / 0.50
	N/A / 2190	N/A / 2080	N/A /3020	N/A / 2130	N/A / 2010
	N/A / 7530	N/A / 7550	N/A / 6910	N/A / 7530	N/A / 7550
	4.5/8.5	4.0/7.0	6.5/11	4.0/7.0	3.5/6.5
	15/20	14/17	15/20	15/20	14/17
	4.7/4.1	4.9/4.1	4.8/4.2	4.9/4.2	4.9/4.1
	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
	2 × 4.5	2 × 4.5	2 × 4.5	2 × 4.5	2 × 4.5
	9.5	9.5	9.5	9.5	9.5
	- BS/JS	- BS/JS	- BS/JIS	- BS/JIS	- BS/JIS
	48 / 420	48 / 420	48 / 730	48 / 730	48 / 730
	650	650	1120	1120	1120
	N/A	N/A	N/A	N/A	N/A
	FET	FET	FET	FET	FET
	157	181	157	157	181
	60	50	60	60	50
	< 75	< 75	< 75	< 75	< 75
	N/A	N/A	N/A	N/A	N/A





Mast type	FB13-20TCB					
	h3 mm	h1 mm	h4 mm	h2/h5 mm	tilt angle° (fwd / rev)	
Simplex	3000	1975	4015	115	5 / 7.5	
	3300	2125	4315	115	5 / 7.5	
	3500	2225	4515	115	5 / 7.5	
	3700	2325	4715	115	5 / 7.5	
	4000	2525	5015	115	5 / 7.5	
	4500	2775	5515	115	3 / 6	
	5000	3035	6015	115	3 / 6	
Duplex	3000	1975	4015	960	5 / 6	
	3300	2125	4315	1110	5 / 6	
	3500	2225	4515	1210	5 / 6	
	3700	2325	4715	1310	5 / 6	
	4000	2525	5015	1510	5 / 6	
Triplex	3700	1775	4715	760	5 / 6	
	4000	1875	5015	860	5 / 6	
	4300	1975	5315	960	3 / 6	
	4500	2045	5515	1030	3 / 6	
	4700	2125	5715	1110	3 / 6	
	5000	2225	6015	1210	3 / 6	
	5500	2415	6515	1400	1.5 / 5	
	6000	2595	7015	1580	1.5 / 5	
	6500	2835	7515	1820	1.5 / 4	
	7000	3035	8015	2020	1.5 / 4	

* h5 including load backrest (without load backrest increase with 305 mm (duplex) or 465 (triplex)

Ast = Working aisle width
Wa = Turning radius
a = Safety clearance = 2 × 100 mm
l6 = Pallet length (800 or 1000 mm)
b12 = Pallet width (1200 mm)

FB13-20TCB Models

Mast Performance and Capacity

Mast type	FB13-20TCB					FB20TCB		FB20TBCB	
	h3 mm	h1 mm	h4 mm	h2/h5 mm	tilt angle° (fwd / rev)	Q, LC=500mm kg Pneumatic tyre	Solid tyre(s)	Q, LC=500mm kg Pneumatic tyre	Solid tyre(s)
Simplex	3000	1975	4000	120	6 / 12	N/A	2000	N/A	2000
	3300	2125	4300	120	6 / 12	N/A	2000	N/A	2000
	3500	2225	4500	120	6 / 12	N/A	2000	N/A	2000
	3700	2325	4700	120	6 / 12	N/A	2000	N/A	2000
	4000	2525	5000	120	6 / 12	N/A	2000	N/A	2000
	4500	2775	5500	120	4 / 6	N/A	1800	N/A	1830
	5000	3035	6000	120	4 / 6	N/A	1600	N/A	1630
Duplex	3000	1975	4000	975	5 / 6	N/A	2000	N/A	2000
	3300	2125	4300	1125	5 / 6	N/A	2000	N/A	2000
	3500	2225	4500	1225	5 / 6	N/A	2000	N/A	2000
	3700	2325	4700	1325	5 / 6	N/A	2000	N/A	2000
	4000	2525	5000	1525	5 / 6	N/A	2000	N/A	2000
Triplex	3700	1775	4700	775	5 / 6	N/A	1950	N/A	1950
	4000	1875	5000	875	5 / 6	N/A	1930	N/A	1930
	4300	1975	5300	975	3 / 6	N/A	1850	N/A	1850
	4500	2045	5500	1045	3 / 6	N/A	1800	N/A	1800
	4700	2125	5700	1125	3 / 6	N/A	1730	N/A	1730
	5000	2225	6000	1225	3 / 6	N/A	1600	N/A	1600
	5500	2415	6500	1415	1.5 / 5	N/A	1170	N/A	1170
	6000	2595	7000	1595	1.5 / 5	N/A	770	N/A	770
	6500	2835	7500	1835	1.5 / 4	N/A	550	N/A	550
	7000	3035	8000	2035	1.5 / 4	N/A	400	N/A	400

h1 = Height with mast lowered
h2 = Standard free lift
h3 = Lift height
h4 = Height with mast raised
h5 = Full free lift
Q = Lifting capacity, rated load
c = Load centre (distance)

* h5 including load backrest (without load backrest increase by 370 mm (duplex and triplex)

	FB13TCB		FB15TCB		FB16TCB		FB18TCB		FB16TBCB		FB18TBCB	
	Q, LC = 500 mm kg Pneumatic tyre	Solid tyre(s)	Q, LC = 500 mm kg Pneumatic tyre	Solid tyre(s)	Q, LC = 500 mmm kg Pneumatic tyre	Solid tyre(s)	Q, LC = 500 mm kg Pneumatic tyre	Solid tyre(s)	Q, LC = 500 mm kg Pneumatic tyre	Solid tyre(s)	Q, LC = 500 mm kg Pneumatic tyre	Solid tyre(s)
	1300	1300	1500	1500	1600	1600	1800	1800	1600	1600	1800	1800
	1300	1300	1500	1500	1570	1570	1800	1800	1600	1600	1800	1800
	1300	1300	1500	1500	1550	1550	1770	1770	1600	1600	1800	1800
	1270	1270	1500	1500	1530	1530	1730	1750	1600	1600	1800	1800
	1200	1230	1400	1450	1450	1470	1630	1670	1600	1600	1800	1800
	1130	1150	1250	1350	1270	1370	1400	1600	1430	1600	1500	1800
	900	1070	1050	1250	1070	1270	1150	1450	1130	1450	1170	1500
	1300	1300	1500	1500	1600	1600	1800	1800	1600	1600	1800	1800
	1270	1270	1500	1500	1550	1550	1800	1800	1600	1600	1800	1800
	1270	1270	1500	1500	1530	1530	1770	1770	1600	1600	1800	1800
	1270	1270	1500	1500	1530	1530	1730	1750	1600	1600	1800	1800
	1200	1230	-	-	1430	1470	1630	1670	1600	1600	1800	1800
	1230	1270	-	-	1470	1530	1630	1750	1600	1600	1800	1800
	1170	1230	-	-	1400	1470	1570	1670	1570	1600	1800	1800
	1130	1170	1250	1400	1330	1430	1470	1630	1530	1550	1700	1800
	1070	1150	1200	1350	1270	1370	1350	1570	1470	1530	1530	1750
	1050	1130	1150	1300	1200	1330	1270	1530	1300	1500	1350	1700
	900	1070	1000	1250	1030	1270	1100	1470	1130	1450	1170	1530
	700	950	770	1100	800	1130	850	1150	800	1130	850	1150
	500	670	550	700	570	730	600	750	570	730	600	750
	370	450	400	470	430	500	450	530	430	500	450	530
	250	300	270	330	300	350	330	370	300	350	330	370

MITSUBISHI FORKLIFT TRUCKS

Steering system

- **On-demand electric power steering** *means smooth, effortless manoeuvring, low energy consumption and – with no need for hydraulics – minimal motor noise, minimal maintenance requirements and no oil leakage.*
- **Tyre rotation sensor** *allows speed and direction of each wheel to be individually controlled in synchrony with steering wheel.*

Brakes

- **Wet disc brakes** *offer powerful braking with minimal wear and maintenance (1200 hour oil replacement interval).*
- **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

- **Performance setting** *includes eight speed settings and three acceleration modes, allowing instant programming without special tools.*
- **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 (IPS)** *shuts down transmission and hydraulics if the operator is unseated for more than two seconds.*

Operator compartment and controls

- **Ergonomic operator compartment** *is equipped with adjustable steering column and other carefully positioned controls to reduce driver fatigue and increase precision.*
- **Full-suspension, fully adjustable seat** *with hip restraints and belt keeps driver safe, comfortable and alert through the longest of shifts.*
- **Vacuum Fluorescent Display (VFD)** *uses text and icons to present a variety of useful real-time information clearly – even in direct sunlight.*

Other features

- **Low-maintenance features and components** *such as the AC motors, wet disc brakes and CAN-bus electrical system are specified to reduce downtime and costs.*
- **IPX3 waterproof rating** *allows outdoor operation even in wind-blown rain.*

Options

- **Range of tyres – including non-puncture super elastic**
- **Load weight indicator in VFD multi display**
- **Cold storage specification**
- **Fingertip controls**
- **Horizontal fork indicator on monitor**
- **Windshield with or without wiper**
- **Laser pointer to indicate position of fork entry**
- **Rear combination lights**
- **Pre-set picking height**

when **reliability** *is* **everything**

Like any product bearing the Mitsubishi name, our materials handling equipment benefits from the huge resources and cutting-edge technology of one of the world's largest corporations. So when we promise you **quality**, **reliability** and **value for money**, you know it's a guarantee we have the power to deliver.

Every model in our comprehensive, award-winning range of forklift trucks and warehouse equipment is built to a high specification and is designed to keep on working for you... day after day... year after year... whatever the job... whatever the conditions.

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You can find your nearest dealer at
www.mitforklift.com

MITSUBISHI FORKLIFT TRUCKS

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mitforklift@mcfe.nl **www.mitforklift.com**

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.