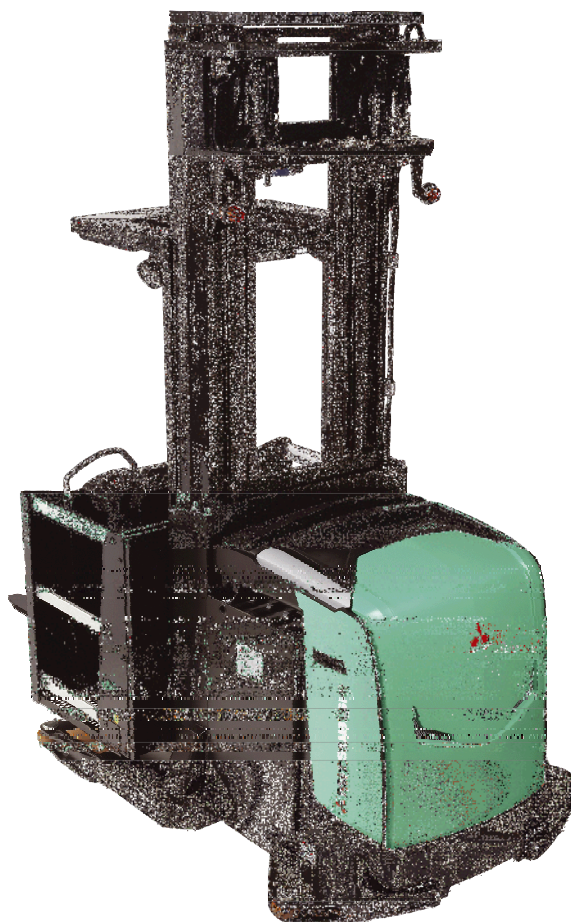


OPBH N– Series

- Specification Manual
- High Level Order picker
 - 1.0 tonnes

OPBH10N
OPBH10NH

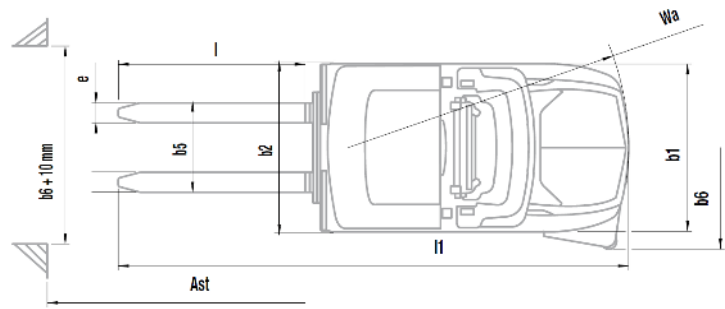
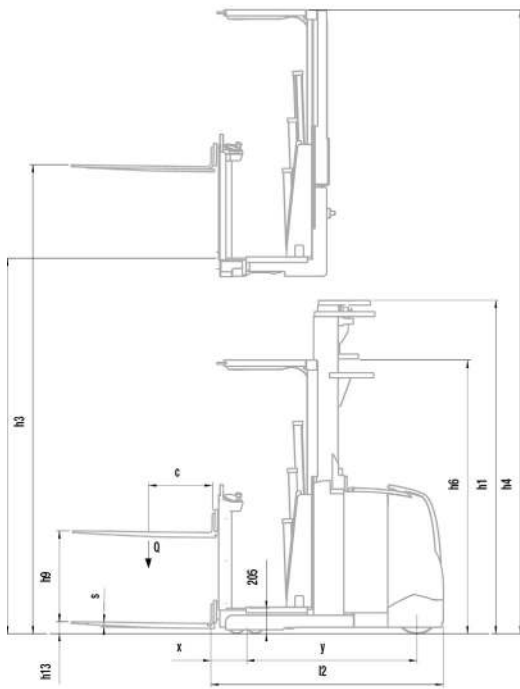
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1. OPBH10N(H) STANDARD CONFIGURATION

PIN code with programmable features, Rollers for fast battery change, LCD display, Emergency escape rope (CE certified, includes harness, lower down rope, instruction manual), Vision mast, Limitless 360 degree electric steering, Stepless lifting and lowering speed, Split operator console at fork side, Ergo lift, Capacitive hand detector, See through cabin floor, Non slip floor mat

Characteristics					
1.1	Manufacturer (abbreviation)			Mitsubishi	Mitsubishi
1.2	Manufacturer's model designation			OPBH10N	OPBH10NH
1.3	Power source: (battery, diesel, LP gas, petrol)			Battery	Battery
1.4	Operator type: pedestrian, (operator)-standing, -seated			Stand-on	Stand-on
1.5	Load capacity	Q	kg	1000	1000
1.6	Load centre distance	c	(mm)	400/600	400/600
1.8	Load wheel axle to fork face (forks lowered)	x	(mm)	210	210/350
1.9	Wheelbase	y	(mm)	1490	1490/1525
Weight					
2.1	Truck weight with nominal load & maximum battery weight		kg	4400*	5200*
2.2	Axle loadings with nominal load & maximum battery weight, drive/load side		kg	1050/3350*	1360/3840*
2.3	Axle loadings without load & with maximum battery weight, drive/load side		kg	1450/1950*	2070/2130*
Wheels, Drive Train					
3.1	Tyres: PT=Power Thane, Vul=Vulkollan, drive/load side			Vul/Vul	Vul/Vul
3.2	Tyre dimensions, drive side		(mm)	360x140	360x140
3.3	Tyre dimensions, load side		(mm)	150x100	150x100
3.5	Number of wheels, drive/load side (x=driven)			1x / 4	1x / 4
3.6	Track width (centre of tyres), drive side	b10	(mm)	867 - 1270	867 - 1270
4.2	Height	h1	(mm)	See tables	See tables
4.4	Lift height (see tables)	h3	(mm)	See tables	See tables
4.5	Overall height with mast raised	h4	(mm)	See tables	See tables
4.7	Height to top of overhead guard	h6	(mm)	2260	2260
4.10	Height of load legs	h8	(mm)	151	151
4.11	Supplementary lift	h9	(mm)	750	750
4.14	Height of the driver's platform	h12	(mm)	See tables	See tables
4.15	Fork height, fully lowered	h13	(mm)	85	85
4.19	Overall length	l1	(mm)	3250	3250
4.20	Length to fork face (includes fork thickness)	l2	(mm)	2095	2095
4.21	Overall width	b1 / b2	(mm)	1016/1000-1590	1016/1000-1590
4.22	Fork dimensions (thickness, width, length)	s / e / l	(mm)	40/120/1150	40/120/1150
4.25	Outside width over forks (minimum/maximum)	b5	(mm)	540	540
4.27	Width over guide rollers (min.)			1090	1090
4.32	Ground clearance at centre of wheelbase, (forks lowered)	m2	(mm)	45	45
4.33a	Working aisle width (Ast) with 1000 x1200 mm pallets, load crosswise	Ast	(mm)	1400	1400
4.34a	Working aisle width (Ast) with 800 x1200 mm pallets, load lengthwise	Ast	(mm)	1300	1300
4.35	Turning circle radius	Wa	(mm)	1705	1705, 1745
4.41	Transfer aisle width (pallet 1000 x 1200 mm lengthwise & 200mm clearance)	l8	(mm)	See tables	See tables
Performance					
5.1	Travel speed, with/without load		km/h	9.0 / 9.0	9.0 / 9.0
5.2	Lifting speed, with/without load		m/s	0.20 / 0.30	0.35 / 0.40
5.3	Lowering speed, with/without load		m/s	0.40 / 0.45	0.40 / 0.45
5.10	Service brakes (mechanical/hydraulic/electric/pneumatic)			Electric	Electric
Electric motors					
6.1	Drive motor capacity (60 min. short duty)		kW	3.5	3.5
6.2	Lift motor output at 15% duty factor		kW	5.0	8.5
6.4	Battery voltage/capacity at 5-hour discharge		V/Ah	24 / 775	48 / 465, 775
6.5	Battery weight		kg	591	746, 1119
Miscellaneous					
8.1	Type of drive control			Stepless	Stepless



- Ast = Working aisle width
- Ast3 = Working aisle width (b12 ≤ 1000 mm)
- $Ast = Wa + \sqrt{(l6 + x)^2 + (b12 / 2)^2} + a$
- Ast3 = Wa + l6 + a + x
- Wa = Turning radius
- l6 = Pallet length
- x = Load wheel axle to fork face
- b12 = Pallet width
- a = Safety clearance = 2 x 100 mm

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2. MODEL PERFORMANCE SPECIFICATION

Model	Drive motor kW	Lift Motor kW	Max platform height (mm)	Volt / Ah
10N	3,5	5,0	8100	24 / 775
10NH	3,5	8,5	10000	48 / 465-775

3. NOISE AND VIBRATION

Level of noise at ear level of driver acc. to EN 12053 2001 and EN ISO 4871

Model	In work, LpA (dB A)	Drive/lift/idle (dB A)
OPBH10N	55	64 / 61 / 35
OPBH10NH	55	64 / 61 / 35

Vibration Level acc. to EN13059 2002

Model	Whole (m/s ²)	Hand- arm (m/s ²)
OPBH10N	1,1	< 2,5
OPBH10NH	1,0	< 2,5

4. MAST AVAILABILITY

Model			Height of platform h12	Closed height h1	Overall height h4	Lift height h3	Order pick height h12 + 1500 mm
10N, 10NH	DUPLIX	D3200	3200	2237	5250	3820	4700
10N, 10NH		D3500	3500	2417	5550	4120	5000
10N, 10NH		D4200	4200	2757	6250	4820	5700
10N, 10NH		D4800	4800	3032	6850	5420	6300
10N, 10NH		D5200	5200	3237	7250	5820	6700
10N, 10NH		D6200	6200	3737	8250	6820	7700
10N, 10NH	TRIPLEX	IT4100	4100	2237	6150	4720	5600
10N, 10NH		IT4600	4600	2237	6650	5220	6100
10N, 10NH		IT5100	5100	2417	7150	5720	6600
10N, 10NH		IT6100	6100	2757	8150	6720	7600
10N, 10NH		IT7000	7000	3032	9050	7620	8500
10N, 10NH		IT7700	7700	3437	9750	8320	9200
10N, 10NH		IT8100	8100	3577	10150	8720	9600
10NH		IT8600	8600	3737	10650	9220	10100
10NH	IT9300	9300	3997	11350	9920	10800	
10NH	IT10000	10000	4207	12050	10620	11500	

5. FORKS AND CARRIAGES

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Load Handling (fork width x length)	CODE	10N	10NH
540 x 800 mm	L800	•	•
540 x 1000 mm	L1000	•	•
540 x 1150 mm	L1150	o	o
FEM fork carriage fork width 235-635mm, length 800 mm	FCMFXXX	•	•

6. WHEEL AVAILABILITY

Wheel type	10N	10NH
Vulkollan	o	o

7. OPTION AVAILABILITY

	CODE	NOTE	10N	10NH
Modification				
Cold store modification to max. -35°C	MODCS		•	•
Picking Cage				
Picking cage 970 x 1430 mm (only on duplex mast h12 =< 4200 mm)	PICK/CAGE	1)	•	•
Battery Carriage				
Short - for 775 Ah battery	BC775		0	-
Short - for 465 Ah battery	BC465		-	0
Long - for 775 Ah battery	BC775		-	0
Width of the Operator Compartment				
Cabin width 1000mm	CAB/1000		0	0
Cabin width 1190mm	CAB/1190		•	•
Cabin width 1390mm	CAB/1390		•	•
Cabin width 1590mm	CAB/1590		•	•
Load Handling (fork width x length)				
540 x 800 mm	L800		•	•
540 x 1000 mm	L1000		•	•
540 x 1150 mm	L1150		0	0
FEM fork carriage fork width 235-635mm, length 800 mm	FCMFXXX		•	•
Outlook				
Special color for chassis	SP/COLOR	2)	•	•
Design covers - label for side plates	DSG/COV	3)	•	•
Other Options				
Operator Console at Mast Side	MAST/PANEL		•	•
Key switch	KEY SWITCH	4)	•	•
Rail Guidance, top of rail 40 mm / 100 mm				
Width over support legs 1016: rail to rail 1260 mm - 1460 mm, 10mm increments	SGRXX/40		•	•
Width over support legs 1219: rail to rail 1470 mm - 1660 mm, 10mm increments	SGRXX/40		•	•
Width over support legs 1419: rail to rail 1670 mm - 1780 mm, 10mm increments	SGRXX/40		•	•
Width over support legs 1016: rail to rail 1260 mm - 1460 mm, 10mm increments	SGRXX/100		•	•
Width over support legs 1219: rail to rail 1470 mm - 1660 mm, 10mm increments	SGRXX/100		•	•
Width over support legs 1419: rail to rail 1670 mm - 1780 mm, 10mm increments	SGRXX/100		•	•
Safety Accessories				
Warning light on the drive unit	STRB		•	•
Drive alarm, for drive, lift and lowering	D/ALARM	5)	•	•
Wire Guidance	WGU	6)	•	•
Line Driver (supports 1000 meter)	LDRIVE	7)	•	•
Automatic slowdown at end of aisle	AUT/SLD		•	•
Automatic stopping at end of aisle	AUT/STOP		•	•
Magnets for End of Aisle Control	MAGNET	8)	•	•
Plexiglas safety cover for headguard	HG/COV	9)	•	•
Steel safety net on headguard	HG/NET		•	•
Fire extinguisher (Powder)	P/EXT	10)	•	•
Lift stop at preset lift height with override	LCOXXX	11)	•	•
PDS – Personnel detection system	To be ann.		-	-
General Accessories				
Picklist holder A4, adjustable	LBA4		•	•
Picklist holder A3, adjustable	LBA3		•	•
Accessory rack	BAR		•	•
Reading light (LED dome light on roof panel)	R/L	12)	•	•
Rear view mirrors, 2 pcs	RVM		•	•
Working lights 2 pieces on the OHG	WORK/L		•	•
Operator compartment fan, in roof panel	HG/FAN		•	•
Radio / CD player and loud speakers	RADIO	13)	•	•
Power supply 12V / 8A	DC096W		•	•
Power supply 24V / 8A	DC144W		•	•
Active Sway Control	ASC		•	•
Power Supply Accessories				
Side covers for battery 24V	BATT/COV		•	-
Quick battery changing device for 2 batteries with brakes	BCT/BR		•	•
Battery connector and cables for 24V	SB24B		•	-
Charger connector for 24V	SB24C		•	-
Battery connector and cables for 48V	SB48B		-	•
Charger connector for 48V	SB48C		-	•

- | | |
|------------------------------------|---|
| 1) Only Duplax Mast =<4200 mm | 8) 4 magnets per working aisle |
| 2) Please state RAL code on order | 9) Plexiglas 8mm |
| 3) High resolution file needed | 10) Overhead guard +130mm |
| 4) Replaces PIN code | 11) Specify required overhead guard height on order |
| 5) Programmable, beeping appr 90dB | 12) LED dome light on roof panel |
| 6) Frequency range 2.0 to 10.0 kHz | 13) Only in combination with option power supply 12V/8A |
| 7) Supports max. 1000 meter | |

8. GROUND PRESSURE

		With load [kg/cm ²]	Without load [kg/cm ²]
10N	Front (drive)	36	49
	Rear (load)	59	39
10NH	Front (drive)	41	52
	Rear (load)	63	46

9. MAST CAPACITY

10N (24V)			Straddle width		
Platform height (mm)	Maximum fork height (mm)	Overall Lowered Height (mm)	mm	1219m	1419m
			775Ah 591kg @600mm (kg)	775Ah 591kg @600mm (kg)	775Ah 591kg @600mm (kg)

10NH (48V)			Straddle width					
Platform height (mm)	Maximum fork height (mm)	Overall Lowered Height (mm)	1016 mm		1219 mm		1419 mm	
			465Ah 746kg @ 600mm (kg)	775Ah 1119kg @ 600mm (kg)	465Ah 746kg @ 600mm (kg)	775Ah 1119kg @ 600mm (kg)	465Ah 746kg @ 600mm (kg)	775Ah 1119kg @ 600mm (kg)

Duplex without free lift					
3200	3820	2237	1000	1000	1000
3500	4120	2417	1000	1000	1000
4200	4820	2757	1000	1000	1000
4800	5420	3032	1000	1000	1000
5200	5820	3237	1000	1000	1000
6200	6820	3737	800	800	800

Duplex without free lift								
3200	3820	2237	1000	1000	1000	1000	1000	1000
3500	4120	2417	1000	1000	1000	1000	1000	1000
4200	4820	2757	1000	1000	1000	1000	1000	1000
4800	5420	3032	1000	1000	1000	1000	1000	1000
5200	5820	3237	1000	1000	1000	1000	1000	1000
6200	6820	3737	900	1000	900	1000	900	1000

Triplex without free lift					
4100	4720	2237	1000	1000	1000
4600	5220	2237	1000	1000	1000
5100	5720	2417	1000	1000	1000
6100	6720	2757	800	800	900
7000	7620	3032	-	600	700
7700	8320	3437	-	-	500
8100	8720	3577	-	-	500

Triplex without free lift								
4100	4720	2237	1000	1000	1000	1000	1000	1000
4600	5220	2237	1000	1000	1000	1000	1000	1000
5100	5720	2417	1000	1000	1000	1000	1000	1000
6100	6720	2757	900	1000	900	1000	1000	1000
7000	7620	3032	-	900	700	1000	800	1000
7700	8320	3437	-	-	500	800	700	1000
8100	8720	3577	-	-	-	800	600	900
8600	9220	3737	-	-	-	600	500	700
9300	9920	3997	-	-	-	-	500	500
10000	10620	4207	-	-	-	-	-	500

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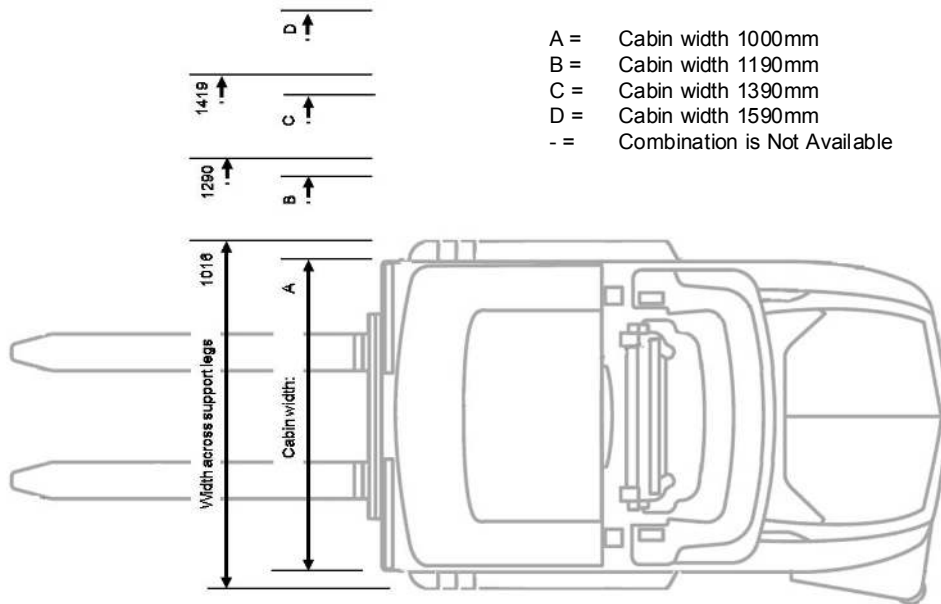
10. CONFIGURATION AVAILABILITY

10N (24V)

Width across support legs -->	1016 mm	1219 mm	1419 mm
Battery capacity -->	775 Ah	775 Ah	775 Ah
Mast type / height			
D 3200	A	B	C, D
D 3500	A	B	C, D
D 4200	A	B	C, D
D 4800	A	B	C, D
D 5200	A	B	C, D
D 6200	A	B	C, D
IT 4100	A	B	C, D
IT 4600	A	B	C, D
IT 5100	A	B	C, D
IT 6100	A	B	C, D
IT 7000	-	B	C, D
IT 7700	-	-	C, D
IT 8100	-	-	C, D
IT 8600	-	-	-
IT 9300	-	-	-
IT 10000	-	-	-

10NH 48V

Width across support legs -->	1016 mm		1219 mm		1419 mm	
	465 Ah	775 Ah	465 Ah	775 Ah	465 Ah	775 Ah
Mast type/height						
D 3200	A	A	B	B	C, D	C, D
D 3500	A	A	B	B	C, D	C, D
D 4200	A	A	B	B	C, D	C, D
D 4800	A	A	B	B	C, D	C, D
D 5200	A	A	B	B	C, D	C, D
D 6200	A	A	B	B	C, D	C, D
IT 4100	A	A	B	B	C, D	C, D
IT 4600	A	A	B	B	C, D	C, D
IT 5100	A	A	B	B	C, D	C, D
IT 6100	A	A	B	B	C, D	C, D
IT 7000	-	A	B	B	C, D	C, D
IT 7700	-	-	B	B	C, D	C, D
IT 8100	-	-	-	B	C, D	C, D
IT 8600	-	-	-	B	C, D	C, D
IT 9300	-	-	-	-	-	C, D
IT 10000	-	-	-	-	-	C, D



11. CABIN AVAILABILITY

Cabin Width (mm)	CODE	10N	10NH
1000	CAB/1000	o	o
1190	CAB/1190	•	•
1390	CAB/1390	•	•
1590	CAB/1590	•	•

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