

OPB10-20NE- Series

Specification Manual • **Low Level Order picker**
All models • **1.0 and 2.0 tonnes**

OPB20NE (P)

OPB10NEF (P)

OPB20NEX (P)

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1. NO10-20NE(P)(F)(X) STANDARD CONFIGURATION

Tandem Vulkollan load wheels, Multifunctional display, Multifunctional steering wheel (electric steering 200°), Fault diagnostic, Drive speed reduction in curves, Maximum drive speed adjusted according to load weight, Floor mat acting as dead man's pedal, Adjustable height for battery changing (116 mm - 231 mm), Rollers for battery change, Battery cover, LED drive lights automatically activated, LED direction indicators, Start button with PIN-code start-up, Channel for 2 wrap reels, Electric lift cut-out

VELIA ES

Low Level Order Picker

AC Power • 1.0 – 2.0 tonnes

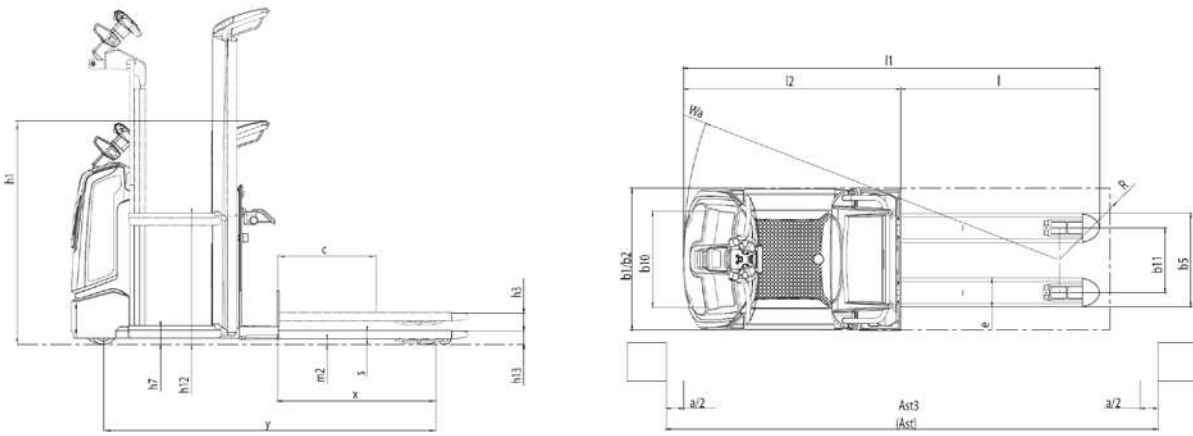
Characteristics					
1.1	Manufacturer (abbreviation)		Mitsubishi	Mitsubishi	Mitsubishi
1.2	Manufacturer's model designation		OPB20NE(NEP)	OPB10NEP(NEFP)	OPB20NEP(NEXP)
1.3	Power source: (battery, diesel, LP gas, petrol)		Battery	Battery	Battery
1.4	Operator type: pedestrian, (operator)-standing, -seated		Stand-on	Stand-on	Stand-on
1.5	Load capacity	Q (kg)	2000	1000	2000
1.6	Load centre distance	c (mm)	600	600	1200
1.8	Load wheel axle to fork face (forks lowered)	x (mm)	961	630	1480
1.9	Wheelbase	y (mm)	2041	1961	2732
Weight					
2.1	Truck weight with maximum battery weight	kg	941 (1070)	1249 (1383)	1521 (1650)
2.2	Axle loadings with nominal load & maximum battery weight, drive/load side	kg	1072 / 1869 (1046 / 2024)	810 / 1439 (833 / 1550)	1135 / 2386 (1249 / 2401)
2.3	Axle loadings without load & with maximum battery weight, drive/load side	kg	625 / 316 (740 / 330)	724 / 525 (829 / 554)	974 / 547 (1076 / 574)
Wheels, Drive Train					
3.1	Tyres: PT=Power Thane, Vul=Vulkollan, drive/load side		Vul/Vul	Vul/Vul	Vul/Vul
3.2	Tyre dimensions, drive side	(mm)	250x100	250x100	Ø250x100
3.3	Tyre dimensions, load side	(mm)	85x75	85x75	Ø85x75
3.4	Castor wheel dimensions (diameter x width)	(mm)	150x50	150x50	Ø150x50
3.5	Number of wheels, drive/load side (x=driven)		2+1x/ 4	2+1x/ 4	2+1x/ 4
3.6	Track width (center of tyres), drive side	b10 (mm)	554	554	554
3.7	Track width (center of tyres), load side	b11 (mm)	374	385	359
Dimensions					
4.2	Height with mast lowered/raised	h1 (mm)	1335 (1365 / 2045)	1335 (1365 / 2045)	1335 (1365 / 2045)
4.4	Lift height	h3 (mm)	115	705	725
4.5	Height, mast extended	h4 (mm)	-	1260	1478
4.8	Seat- or stand height	h7 (mm)	105 (117)	105 (117)	105 (117)
4.9	Height of tiller arm / steering console min. (max.)	h14 (mm)	1140 / 1220 (2040)	1140 / 1220 (2040)	1140 / 1220 (2040)
4.14	Platform height, raised	h12 (mm)	- (804)	- (804)	- (804)
4.15	Fork height, fully lowered	h13 (mm)	85	95	80
4.19	Overall length	l1 (mm)	2413	2667	3793
4.20	Length to fork face (includes fork thickness)	l2 (mm)	1262	1517	1444
4.21	Overall width	b1 / b2 (mm)	810 (820)	810 (820)	810 (820)
4.22	Fork dimensions (thickness, width, length)	s / e / l (mm)	50 / 166 / 1150	65 / 165 / 1150	60 / 194 / 2350
4.25	Outside width over forks (min./max.)	b5 (mm)	540	550	550
4.32	Ground clearance at center of wheelbase, (forks lowered)	m2 (mm)	35	30	25
4.34	Working aisle width, with 800x1200 mm pallets, load lengthwise	Ast (mm)	2663	2914	4034
4.35	Turning circle radius	Wa (mm)	2224	2144	2914
Performance					
5.1	Travel speed, with / without load	km/h	12 / 9 / 6 / 12	12 / 9 / - / 12	12 / 9 / 6 / 12
5.2	Lifting speed, with / without load	m/s	0.1 / 0.1	0.073 / 0.09	0.031 / 0.05
5.3	Lowering speed, with / without load	m/s	0.1 / 0.1	0.228 / 0.075	0.145 / 0.082
5.7	Gradeability, with / without load	%	7 / 15	7 / 15	7 / 15
5.10	Service brakes (mechanical/hydraulic/electric/pneumatic)		Electric	Electric	Electric
Electric motors					
6.1	Drive motor capacity (60 min. short duty)	kW	2.2	2.2	2.2
6.2	Lift motor output at 15% duty factor	kW	1.2	1.2	1.2
6.4	Battery voltage/capacity at 5-hour discharge	V/Ah	24 / 375, 465	24 / 465, 620	24 / 465, 620
6.5	Battery weight	kg	280 - 360	360 - 475	360 - 475
Miscellaneous					
8.1	Type of drive control		Stepless	Stepless	Stepless
8.4	Noise level, mean value at operators ear (EN 12053:2001)	dB(A)	63	59	61

Continuing improvement may lead to changes in these specifications

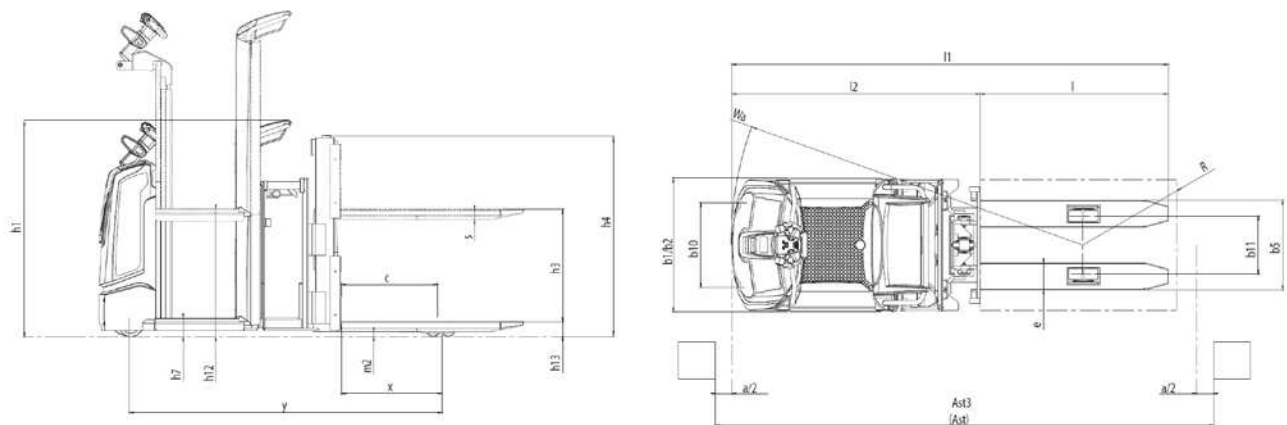
* Travel Speed with load 500/1000/2000 Kg

OPB20NE: Standard model
OPB20NEP: Model with rising platform

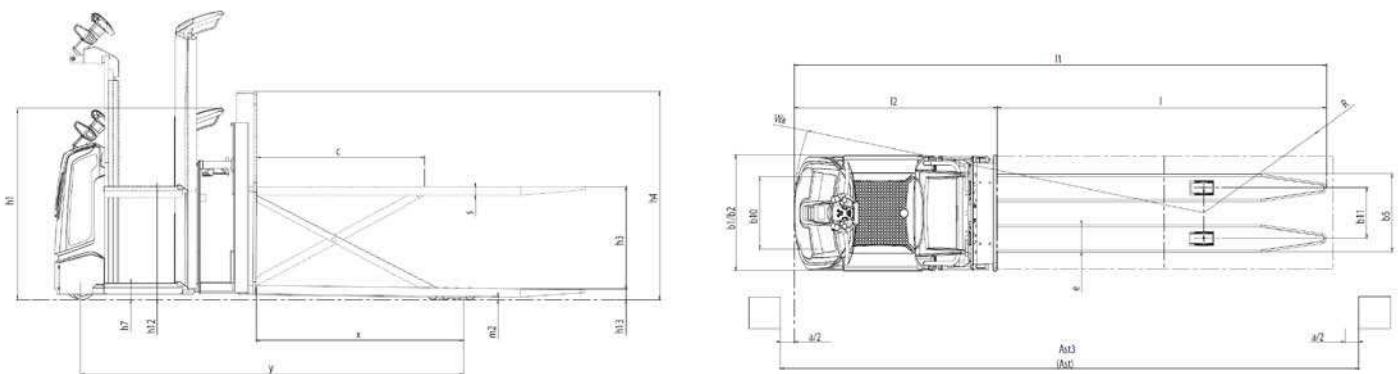
Ast = Working aisle width
 Wa = Turning radius
 200 = Safety clearance = 2 x 100 mm
 l6 = Pallet length



OPB10NEF: Rising fork model
OPB10NEFP: Model with rising forks and rising platform



OPB20NEX: Scissor lift forks model
OPB20NEXP: Model with scissor lift forks and rising platform



2. MODEL PERFORMANCE SPECIFICATION

Model	Drive motor kW	Lift Motor kW	Drive Speed with* / without) km/h	Battery Ah
20NE	2,2	1,2	12/9/6 / 12	375,465
20NEP	2,2	1,2	12/9/6 / 12	375,465
10NEF	2,2	1,2	12/9/- / 12	465,620
10NEFP	2,2	1,2	12/9/- / 12	465,620
20NEX	2,2	1,2	12/9/6 / 12	465,620
20NEXP	2,2	1,2	12/9/6 / 12	465,620

*) drive speed with load 0/500/1000 cq 2000 kg

3. NOISE AND VIBRATION

Level of Noise at ear level of driver
acc. to EN12053 2001 and EN ISO 4871

Vibration Level acc. to
EN13059 2002

Model	In work, LpA (dB A)	Drive/lift/idle (dB A)
OPB20NE	63	73 / 59 / 49
OPB20NEP	63	73 / 59 / 49
OPB10NEF	59	70 / 61 / 42
OPB10NEFP	59	70 / 61 / 42
OPB20NEX	61	71 / 66 / 53
OPB20NEXP	61	71 / 66 / 53

Model	Whole body vibration (m/s ²)	Hand- arm vibration (m/s ²)
OPB20NE	0,8	-
OPB20NEP	0,8	-
OPB10NEF	0,9	-
OPB10NEFP	0,9	-
OPB20NEX	0,9	-
OPB20NEXP	0,9	-

4. FORKS AND CARRIAGES

Forklength (mm)	Forklength x width (mm)	x = (mm)	CODE	20NE
1 Pallet Handling	1150 x 540	961	L1150/540	o
2 Pallet Handling	2350 x 540	1801	L2350/540	•
Special Pallet Handling	1150-2350 x 480-660	961/1261/1711/1801	LXXXX/XXX	E
1 Roll Container Handling	1150x520	961	L1150/520	•
2 Roll Containers Handling	1450x520	961	L1450/520	•
3 Roll Containers Handling	2350x520	1801	L2350/520	•

5. WHEEL AVAILABILITY

Wheel type	CODE	20NE	20NEP	10NEF	10NEFP	20NEX	20NEXP
Drive, Vulkollan	VUL/DW	o	o	o	o	o	o
Drive, Power Friction	PF/DW	•	•	•	•	•	•

Legenda:	
o	Standard
•	Option
-	Not available
E	Extended lead time

6. OPTION AVAILABILITY

	CODE	NOTE	20NE	20NEP	10NEF	10NEFP	20NEX	20NEXP
Modification								
Cold Store Modification -35°C	MODCS		•	•	•	•	•	•
Outlook								
Special color labels	SP/COLOR	1)	•	•	•	•	•	•
Design covers - label for side plates.	DSG/COV	2)	•	•	•	•	•	•
Other Options								
Conventional 360° electric steering	ELEC/S360		•	-	•	-	•	-
Key Switch	KEY SWITCH		•	•	•	•	•	•
Accessory Sets								
List Picking	LIST/PICK	3) 6)	•	•	•	•	•	•
Computer Picking	COMP/PICK	4,6	•	•	•	•	•	•
Voice Picking	VOICE/PICK	5) 6)	•	•	•	•	•	•
High Performance	HIGH/PERF	8)	•	•	•	•	•	•
Safety Accessories								
Drive alarm	D/ALARM	9)	•	•	•	•	•	•
Warning light	STRB	10)	•	•	•	•	•	•
Rubber bumper	RUB/B	11)	•	•	•	•	•	•
Load Handling Equipments								
Load backrest	BACKREST	12) 13)	•	•	-	-	•	•
Battery protection plate	BATT/PLATE	13)	•	•	-	-	-	-
Pallet entry and exit rollers	PEPR		•	•	-	-	-	-
General Accessories								
Accessory rack	BAR		•	•	•	•	•	•
Picklist holder A4	LBA4	14) 15)	•	•	•	•	•	•
Computer rack	RACK/C	14) 15)	•	•	•	•	•	•
Bottle rack	RACK/B	14)	•	•	•	•	•	•
Pen holder	PENHOLD	14)	•	•	•	•	•	•
Garbage bag	G/BAG	14)	•	•	•	•	•	•
Power supply - 12V/12.5A	DC150W		•	•	•	•	•	•
Power supply - 24V/ 6.5A	DC156W		•	•	•	•	•	•
Power supply - 12V/12.5A + 24V/6.5A	DC150/156W		•	•	•	•	•	•
Equipment pocket	P/BS		•	•	•	•	•	•
Foldable seat	SEAT/FOLD		•	-	•	-	•	-
Walk beside drive button	WBDB		•	•	•	•	•	•
Walk beside drive button - Lifting and Lowering	WBDB/LL		•	•	•	•	•	•
Walk beside drive button (forward drive, lifting and lowering)	WBDB/DLL		•	•	•	•	•	•
Shelf for temporary storage of picked items	SHELF		-	•	-	•	-	•
Second level order picking	SLOP	16)	•	•	•	-	•	-
Power Supply Accessories								
Battery changing carriage for 2 batteries	BCT/BR	17)	•	•	•	•	•	•
Battery connector and cables	SB24B		•	•	•	•	•	•
Charger connector	SB24C		•	•	•	•	•	•

- 1) Please state RAL CODE on order
- 2) High resolution file needed
- 3) Incl. Accessory rack, List bracket, Garbage bag, Bottle rack, Pen holder and Equipment pocket
- 4) Incl. Accessory rack, Computer rack, Garbage bag, Bottle rack, Pen holder, Power supply 12V and Equipment pocket)
- 5) Incl. Accessory, Garbage bag, Bottle rack, Pen holder and Equipment pocket
- 6) Not together
- 8) Incl. Anti locking brakes, traction control and higher travel speed (load 0 / 500 / 1000 / 2000 kg) resp. 13 / 13 / 11 / 8,5
- 9) Beeping ca. 90 dB

- 10) Blinking
- 11) In front of truck
- 12) H=1560 mm
- 13) Not together
- 14) Requires BAR
- 15) Not together
- 16) Incl. safety bar and steps
- 17) Incl. rollers and stop

7. GROUND PRESSURE

		With load [kg/cm ²]	Without load [kg/cm ²]
OPB20NE	Front (drive)	41	31
	Rear (load)	68	28
OPB20NEP	Front (drive)	41	34
	Rear (load)	71	29
OPB10NEF	Front (drive)	36	34
	Rear (load)	60	36
OPB20NEFP	Front (drive)	36	36
	Rear (load)	62	37
OPB20NEX	Front (drive)	42	39
	Rear (load)	77	37
OPB20NEXP	Front (drive)	44	41
	Rear (load)	77	37

Legenda:	
o	Standard
•	Option
-	Not available
E	Extended lead time