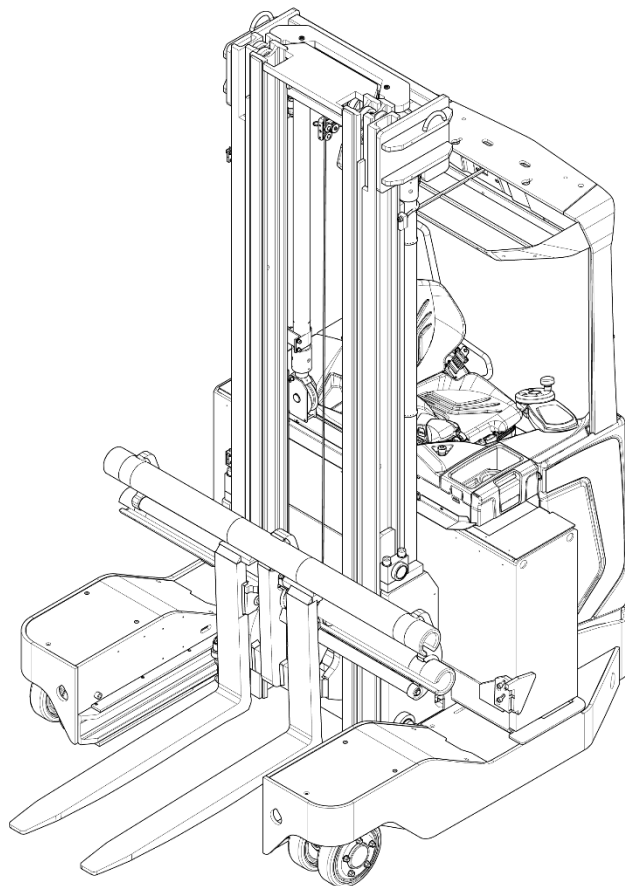




SPECIFICATION MANUAL

RBM20-25N2



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1 Standard configuration

1.1 RBM20N2 / RBM25N2 standard configuration

		RBM20N2	RBM25N2
Nominal capacity	kg	1,400	1,400
Load centre	mm	600	600
Voltage	V	48	48
Maximum battery capacity	Ah	775 - 930	775 - 930
Overhead guard height	mm	2,180	2,180
Load wheel dimensions	pcs / mm	2 / 285 x 75	2 / 285 x 75
Traction wheel dimensions	pcs / mm	1 / 360 x 140	1 / 360 x 140
Chassis width	mm	1,734	1,734

Supplied with:

Unlimited 360 degree steering with electrically rotatable load wheels and 6 Multiway steering modes:

- standard reach truck drive
- lateral drive
- diagonal drive
- rotation drive
- agile cornering drive
- automatic transition from standard drive to lateral drive

All motors AC-motors

Finger-tip hydraulics

Stepless control for traction and lift motor

Direction control by hand and foot

Triplex Full free lift mast

Regenerative braking

Fork positioner, width over forks 500 – 1700 mm

Control panel includes:

- Hour-meter / BDI
- Driving direction display
- Driving speed display
- Fault diagnostic
- Working hours
- Indicator for maintenance need
- Time & date display
- Lift height indicator (above free lift)

Vulkollan wheels

Drive speed limitation according to lift height

Ignition key start

Load wheel brakes

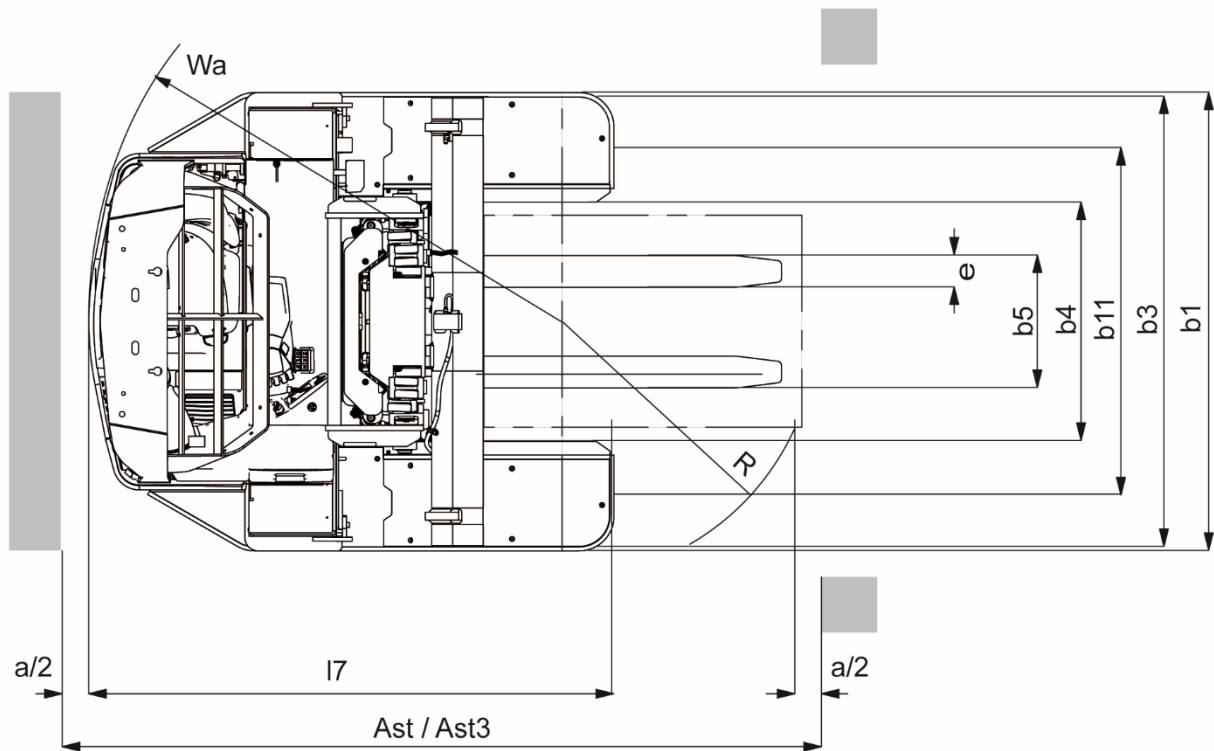
Temperature control in traction, pump motors and in controllers

Seat Grammer MSG20

Distance between load legs 900 mm (b4), suitable for EUR pallet (800 x 1,200 mm lengthwise) handling

Integrated side shift (+/- 75 mm) and tilting
fork carriage (2/4 degrees)

Unlimited 360 degree electric steering with full
adjustable steering console



1.2.1 RBM20N2, RBM25N2

1	IDENTIFICATION		RBM20N2	RBM25N2
1.1	Manufacturer		Mitsubishi	Mitsubishi
1.2	Manufacturer's type designation		RBM20N2	RBM25N2
1.3	Drive		Electric	Electric
1.4	Operator type		Seated	Seated
1.5	Load capacity	Q [t]	2000	2000
1.6	Load center distance	c [mm]	600	600
1.8	Load distance, centre of drive load to fork	x [mm]	328	328
1.9	Wheel base	y [mm]	1,550	1,550
2	WEIGHTS			
2.1*	Service weight	[kg]	6,888	7,784
2.2	Axle loading nominal load, with battery, front / rear	[kg]	2,672 / 2 x 1,108	2,907 / 2 x 1,188
2.3	Axle loading unladen, with battery, front / rear	[kg]	591 / 3 x 3,148	521 / 3 x 3,631
2.4	Axle loading laden, forks advanced, front / rear	[kg]	2,292 / 2 x 2,298	2,292 / 2 x 2,298

			RBM20N2	RBM25N2
2.5	Axle loading laden, forks retracted, front / rear	[kg]	2,672 / 2 x 1,108	2,907 / 2 x 1,188
3	WHEELS AND TYRES			
3.1	Tyres, material (R=rubber / U=Urethane / Vul=Vulkollan / P=Powerthane), drive / load side		Vul	Vul
3.2	Tyre size, front	[mm]	Ø360x140	Ø360x140
3.3	Tyre size, rear	[mm]	Ø285x75x2	Ø285x75x2
3.5	Wheels, number front / rear (x = driven wheels)		2+2/1x	2+2/1X
3.7	Track width, rear	b11 [mm]	1,385	1,385
4	DIMENSIONS			
4.1	Tilt of fork carriage, forward / backward	[]	2,0 / 6,0	2,0 / 6,0
4.2	Height, mast lowered	h1 [mm]	2,510 – 3,877	2,510 – 4,043
4.3	Free lift	h2 [mm]	1,800 – 3,167	1,800 – 3,334
4.4	Lift	h3 [mm]	5,400 – 9,500	5,400 – 10,000
4.5	Height, mast extended	h4 [mm]	6,200 – 10,300	6,200 – 10,800
4.7	Height of overhead guard	h6 [mm]	2,190	2,190
4.8	Seat height relating to SIP**	h7 [mm]	1,030	1,030
4.10	Height of load legs	h8 [mm]	446	446
4.15	Fork height, lowered	h13 [mm]	50	50
4.19	Overall length	l1 [mm]	2,630	2,630
4.20	Length to face of forks	l2 [mm]	1,480	1,480
4.21	Overall width	b1/b2 [mm]	1,730	1,730
4.22	Fork dimensions DIN ISO 2331	s/e/l [mm]	50 / 120 / 1,150	50 / 120 / 1,150
4.23	Fork carriage ISO 2328 class/type A, B		2A	2A
4.24	Fork carriage width	b3 [mm]	1,700 / 2,200	1,700 / 2,200
4.25	Distance between fork arms	b5 [mm]	500 – 1,700 / 2,200	500 – 1,700 / 2,200
4.26	Distance between load legs	b4 [mm]	900	900
4.28	Reach distance	l4 [mm]	610	610

4.32	Ground clearance, center of wheel base	m2 [mm]	75	75
			RBM20N2	RBM25N2
4.33	Aisle width for pallets 1,000x1,200 mm, crossways	Ast [mm]	2,887	2,887
4.34	Aisle width for pallets 800x1,200mm, lengthwise	Ast [mm]	2,750	2,750
4.35	Turning radius	Wa [mm]	1,788	1,788
4.37	Length across load legs	l7 [mm]	1,982	1,982
5	PERFORMANCE			
5.1	Travel speed, laden / unladen	[km/h]	14 / 14	14 / 14
5.2	Lift speed, laden / unladen	[m/s]	0.43 / 0.58	0.39 / 0.58
5.3	Lowering speed, laden / unladen	[m/s]	0.50 / 0.55	0.50 / 0.55
5.4	Reaching speed, laden / unladen	[m/s]	0.1 / 0.1	0.1 / 0.1
5.8	Maximum gradeability, laden / unladen	[%]	11.0 / 11.0	11.0 / 11.0
5.9	Acceleration time, laden / unladen	[s]	5.4 / 5.0	5.6 / 5.1
5.10	Service brake		Mechanical	Mechanical
6	MOTORS			
6.1	Traction motor rating S2 60%	[kW]	7.5	7.5
6.2	Lift motor rating S3 15%	[kW]	14	14
6.4	Battery voltage / nominal capacity (5 h)	[V/Ah]	48 / 775, 930	48 / 775, 930
6.5	Battery weight	[kg]	1,100 / 1,300	1,100 / 1,300
8.1	Type of drive unit		Stepless	Stepless
10	OTHER			
10.7	Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871 in work L_{pAZ}^{***}	[dB (A)]	68	68
10.7.1	Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 487, drive / lift / idle L_{WAZ}^{***}	[dB (A)]	80	80
	Whole-body vibration according to EN 13 059:2002+A1:2008****	[m/s ²]	0.5	0.5
			RBM20N2	RBM25N2
	Hand-arm vibration according to EN 13 059:2002+A1:2008****	[m/s ²]	< 2.5	< 2.5

Manufacturer reserves the right to make technical changes.



- * Values of the table according to the smallest size of batteries.
- ** Measured with standard seat.
- *** Inaccuracy of 4 dB (A).
- *** Body tremble measured with air pressured seat.

2 Energy consumption, noise and vibration

2.1 Engine performance

MODEL	TRACTION MOTOR kW	LIFT MOTOR kW	DRIVE SPEED WITH / WITHOUT* (m/sec)	LIFTING SPEED WITH / WITHOUT (m/sec)	LOWERING SPEED WITH / WITHOUT (m/sec)	ENERGY CONSUMPTION kWh
RBM20N2	7.5	10	12 / 12	0.4 / 0.65	0.55 / 0.5	3.7 (Pro) / 3.1 (Eco)
RBM25N2	7.5	14	12 / 12	0.4 / 0.7	0.55 / 0.5	3.7 (Pro) / 3.1 (Eco)

* Drive speed max 9km/h to forks direction

2.2 Level of noise at ear level of the driver according to EN12053 2001 and EN ISO 4871

MODEL	IN WORK, LpA (dB A)	DRIVE / LIFT / IDLE (dB A)
RBM20N2	66	58 / 73 / 50
RBM25N2	63	61 / 69 / 48

2.3 Vibration level according to EN13059 2002

MODEL	WHOLE BODY VIBRATION (m/s ²)	HAND-ARM VIBRATION (m/s ²)
RBM20N2	0.31	< 2.5
RBM25N2	0.31	< 2.5

3 Mast availability chart

CODE	RBM20N2	RBM25N2
ITF480	S	S
ITF540	S	S
ITF570	S	S
ITF590	S	S
ITF630	S	S
ITF700	S	S
ITF750	S	S
ITF800	S	S
ITF850	S	S
ITF900	S	S
ITF950 *	S	S
ITF1000	-	S

*) For RBM20N2 ITF950 with 930 Ah battery only!

4 Option availability chart



NOTE: Refer to the Option Manual for option specifications.

○	Option to select, no add-on price
•	Available option

4.1 Outlook

	*	CODE	RBM20N2	RBM25N2
Special color labels (inform RAL code)		SP/COLOR	•	•
Customer design labels (material provided by the customer)		DSG/COV	•	•

4.2 Wheel options

	*	CODE	RBM20N2	RBM25N2
Vulkollan traction and load wheels		VUL/DW	•	○
Power friction traction wheel		PF/DW	•	•
Grooved vulkollan traction wheel and vulkollan load wheels		GRV/DW	•	•
Antistatic vulkollan traction wheel and vulkollan load wheels		EC/DW	•	•

4.3 Temperature protection modifications

	*	CODE	RBM20N2	RBM25N2
Hot store modification > 40°C		MODHS	•	•

- | | |
|---|-----------------------------------|
| ○ | Option to select, no add-on price |
| • | Available option |

4.4 Load handling equipment

	CODE	RBM20N2	RBM25N2
Fork positioner with sideshift, width over forks 2200	SS/FP2200	•	•
Load weight indicator, steps of 50 kg	LWI	•	•

- | | |
|---|-----------------------------------|
| ○ | Option to select, no add-on price |
| • | Available option |

4.5 Safety accessories

		CODE	RBM20N2	RBM25N2
Blue spot rear light	10)	FLR/SPOT/R	•	•
Warning light (yellow) on the roof (selecting switch)	11)	STRB	•	•
Warning lights flexible mounted	12)	STRB/F	•	•
Working lights		WORK/L	•	•
Drive alarm (programmable)		D/ALARM	•	•
Rear view mirror	13)	RVM	•	•
Overhead guard steel safety net	14)	HG/NET	•	•
Plexiglass safety cover for overhead guard	15)	HG/COV	•	•
Left shoulder protection plate	16)	LSP	•	•
Fire extinguisher		P/EXT	•	•

NOTE:

- 10) Not in combination with the D/ALARM and STRB/P options.
- 11) Overhead guard height + 95 mm.
- 12) Not in combination with the D/ALARM and FLR/SPOT/R options.
- 13) Requires the BAR option.
- 14) Not in combination with the HG/COV option.
- 15) Not in combination with the HG/NET option.
- 16) Not available on the C-model.

○	Option to select, no add-on price
•	Available option

4.6 Driver's seat and accessories

	*	CODE	RBM20N2	RBM25N2
Grammer MSG20		SEAT	O	O
Grammer MSG65 (mechanical suspension, includes safety belt)		SEAT/C	•	•
Grammer MSG65 with seat belt interlock switch		SEAT/C/SB	•	•
Grammer MSG65 with heating		S/HEAT/C	•	•
Grammer MSG75 (air suspension, includes safety belt, arm rest and backrest extension)		SEAT/LX	•	•
Grammer MSG75 with seat belt interlock switch		SEAT/LX/SB	•	•
Grammer MSG75 with heating		S/HEAT/LX		
Arm rest • For MSG65 seat		ARM/C	•	•
Backrest extension for MSG65 seat		BR/C	•	•
Seat belt for MSG20 seat		S/BELT	•	•

O Option to select, no add-on price

• Available option

N/A Not available

*** Overhead guard height + 95 mm

4.7 General accessories

	*	CODE	RBM20N2	RBM25N2
Reading lamp	14)	R/L	•	•
Audio system	15)	AUDIO/S	•	•
Current output		DC053W	•	•
Accessory rack		BAR	•	•
A4 list bracket	16)	LBA4	•	•
Computer rack	17)	PCS	•	•
Operator compartment fan		HG/FAN	•	•
PIN code access with Start switch		PIN	•	•

NOTE:

14) Requires the DC053W option.

15) Requires the DC053W option.

16) Requires the BAR option.

17) Requires the BAR option.

○	Option to select, no add-on price
•	Available option

4.8 Power supply accessories

	*	CODE	RBM20N2	RBM25N2
Quick battery locking, seat side		QBL RH	•	•
Quick battery locking, steering wheel side		QBL LH	•	•

	*	CODE	RBM20N2	RBM25N2
Battery changing system for two batteries, 465 Ah battery		BC465	•	•
Battery changing system for two batteries, 620 Ah battery		BC620	•	•
Battery changing system for two batteries, 775 Ah battery		BC775	•	•
Battery connector and cables		DIN48B	•	•
Charger connector		DIN48C	•	•

○ Option to select, no add-on price

• Available option

4.9 Display language

	*	CODE	RBM20N2	RBM25N2
English – E N		DEN	○	○
Dutch – Nederlands - NL		DNL	○	○
Bulgarian - български (Bălgarski) - BG		DBG	○	○
Czech - Čeština - Cz		DCZ	○	○
Danish - Dansk - DA		DDA	○	○
German - Deutsch - DE		DGE	○	○
Estonian - Eesti - ET		DET	○	○

	*	CODE	RBM20N2	RBM25N2
Greek - Elinika - EL		DEL	○	○
Spanish - Español - ES		DSP	○	○
French - Français - FR		DFR	○	○
Italian - Italiano - IT		DIT	○	○
Latvian - Latviešu valoda - LV		DLV	○	○
Lithuanian - Lietuvių kalba - LT		DLT	○	○
Hungarian - Magyar – HU		DHU	○	○
Polish - Polski - PL		DPL	○	○
Portuguese - Português - PT		DPO	○	○
Romanian - Română - RO		DRO	○	○
Slovak - Slovenčina - SK		DSK	○	○
Slovene - Slovenščina - SL		DSL	○	○
Finnish - Suomi - FI		DFI	○	○
Swedish - Svenska - SV		DSW	○	○
Norwegian - Norsk - NO		DNO	○	○
Russian - Russkiy - RU		DRU	○	○
Turkish - Türkçe -TR		DTR	○	○

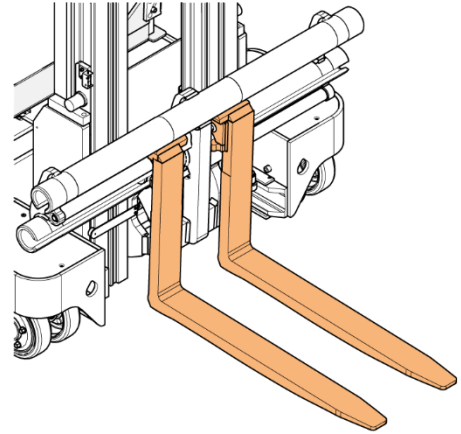
○	Option to select, no add-on price
•	Available option
N/A	Not available

5 Forks

FORK LENGTH

Standard forks (l x s x e)
1150 mm x 50 mm x 120 mm

NOTE: The only available fork length is 1150 mm.



6 Point loadings

		WITH LOAD [kg / cm ²]	WITH LOAD [kg / cm ²]	WITHOUT LOAD [kg / cm ²]
		MAST RETRACTED	MAST FORWARD	
RBM20N2	Front (drive)	45	28	49
	Rear (load)	68	78	46
RBM25N2	Front (drive)	48	30	53
	Rear (load)	73	84	53

7 Battery dimensions

MODEL	BATTERY CAPACITY	BATTERY WEIGHT	4.33		4.34		L4	L2	X
	[aH]	[kg]	Ast [mm]	Ast3 [mm]	Ast [mm]	Ast3 [mm]	4.28 [mm]	4.20 [mm]	1.8 [mm]
RBM20N2	775	1,100	2,858	2,632	2,918	2,832	500	1,418	317
	930	1,300	2,913	2,704	2,984	2,904	428	1,490	245
RBM25N2	775	1,100	2,858	2,632	2,918	2,832	500	1,418	317
	930	1,300	2,913	2,704	2,984	2,904	428	1,490	245

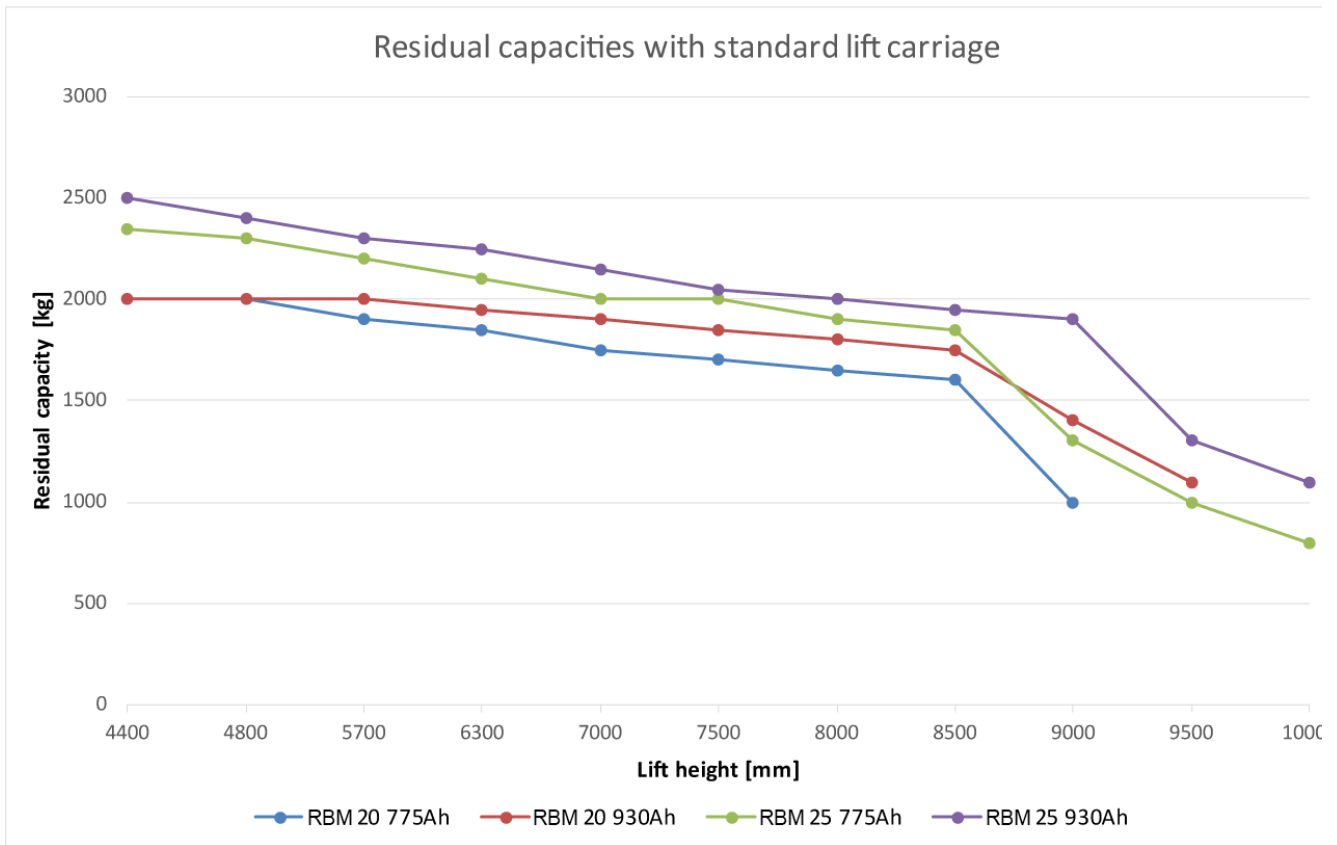
8 Mast capacity charts

8.1 Residual capacity chart, standard

Bolzoni 500-1700 mm fork positioner

Model	MITSUBISHI		RBM20N2		RBM25N2	
Nominal capacity	LC 400/600 mm	kg	2000		2500	
Battery	Capacity	Ah	775	930	775	930
	Minimum weight	kg	1100	1300	1100	1300
Lift height	(4400)		2000	2000	2350	2500
	4800		2000	2000	2300	2400
	5700		1900	2000	2200	2300
	6300		1850	1950	2100	2250
	7000		1750	1900	2000	2150
	7500		1700	1850	2000	2050
	8000		1650	1800	1900	2000
	8500		1600	1750	1850	1950
	9000		1000	1400	1300	1900
	9500		-	1100	1000	1300
	10000		-	-	800	1100

Values in parentheses "(xxx)" are not available mast heights, they are intermediate values.



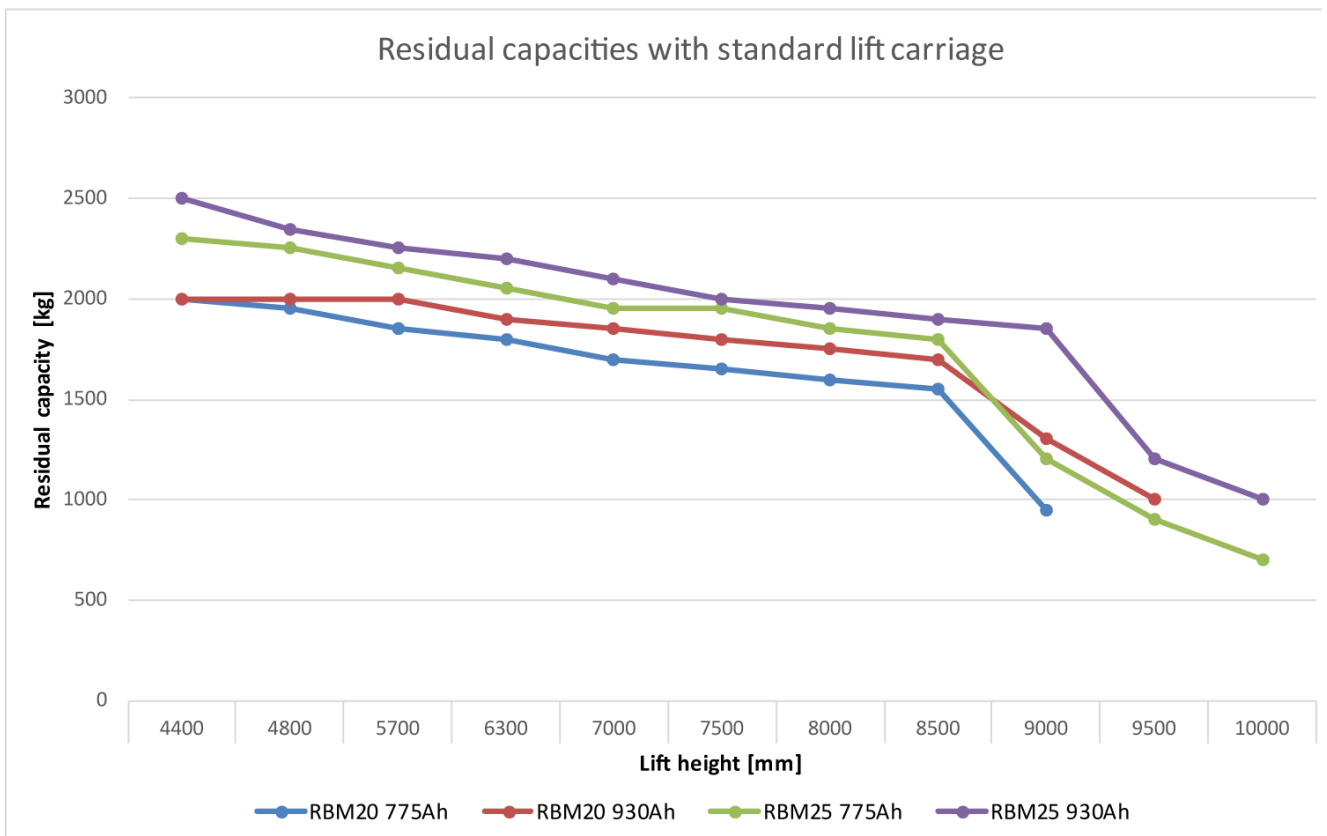
8.2 Residual capacity chart, 2200 fork positioner

Bolzoni 500-2200 mm fork positioner

Model	MITSUBISHI		RBM20N2		RBM25N2	
	Nominal capacity	LC 400/600 mm	kg	2000		2500
Battery	Capacity	Ah	775	930	775	930
	Minimum weight	kg	1100	1300	1100	1300
Lift height	(4400)		2000	2000	2300	2500
	4800		1950	2000	2250	2350
	5700		1850	2000	2150	2250
	6300		1800	1900	2050	2200
	7000		1700	1850	1950	2100
	7500		1650	1800	1950	2000

Model	MITSUBISHI	RBM20N2		RBM25N2	
	8000	1600	1750	1850	1950
	8500	1550	1700	1800	1900
	9000	950	1300	1200	1850
	9500	-	1000	900	1200
	10000	-	-	700	1000

Values in parentheses "(xxxx)" are not available mast heights, they are intermediate values.





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