



# MR14-25

SPEC SHEET

1,400 - 2,500 kg

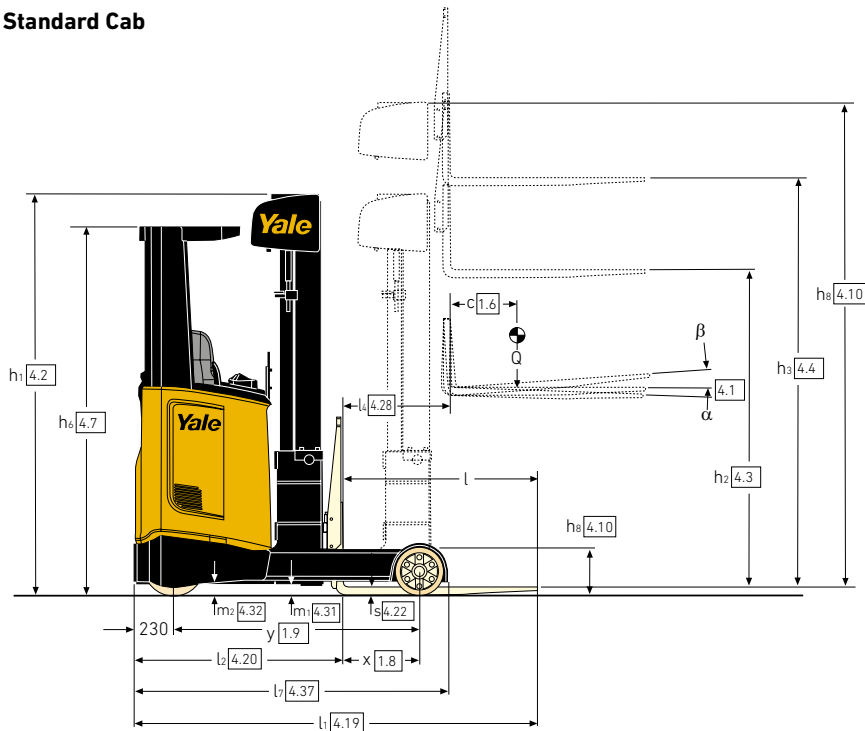
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MR Series

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Reach Truck

Standard Cab

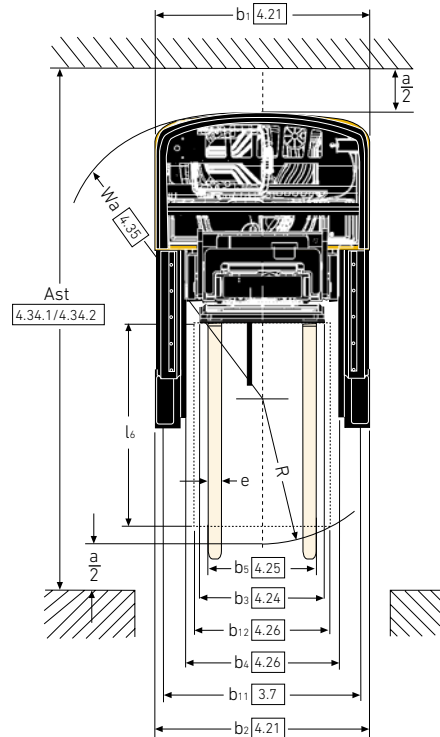
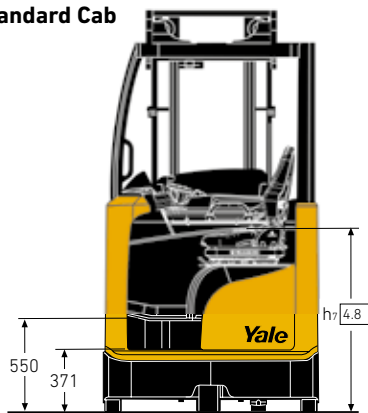


$A_{st} = Wa + R + a$   
 (See rows 4.34.1 and 4.34.2)

$$R = \sqrt{(l_6 - x)^2 + \left(\frac{b_{12}}{2}\right)^2}$$

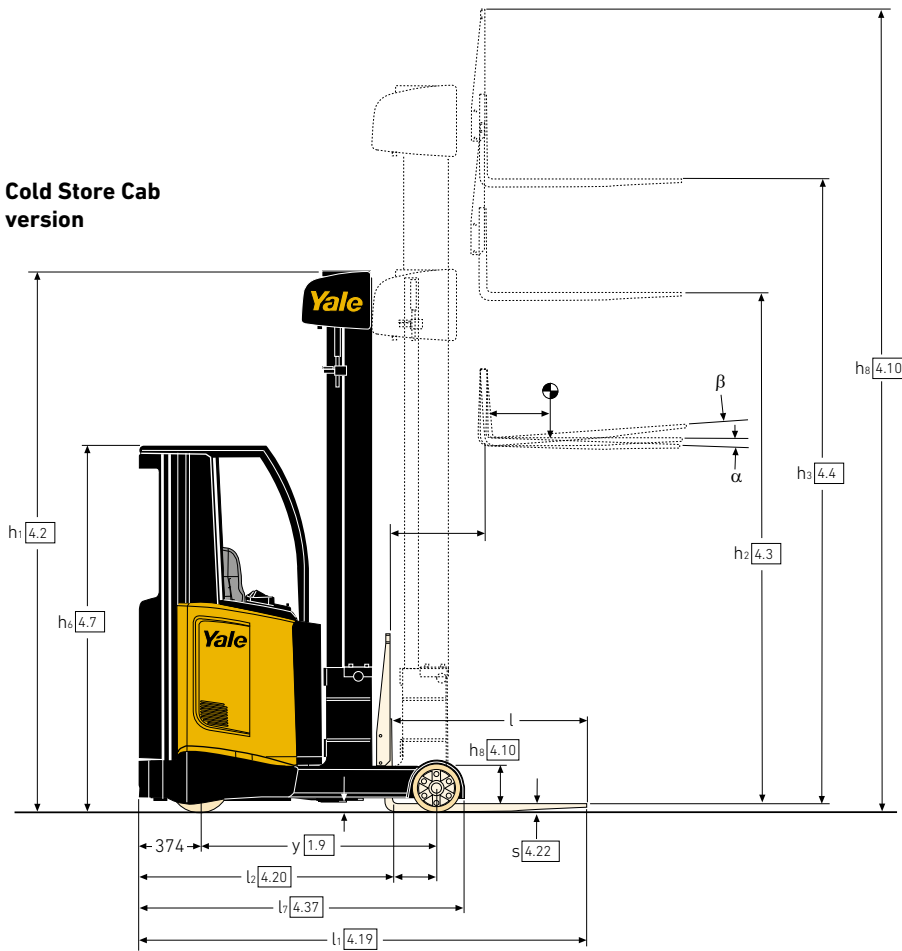
$a = 200\text{mm}$

Standard Cab

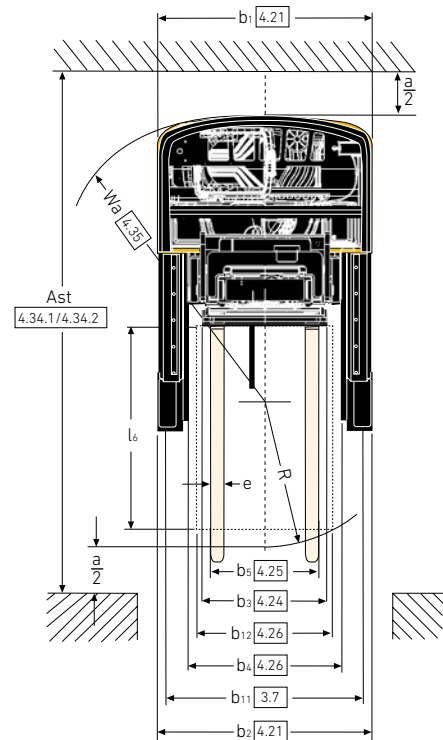
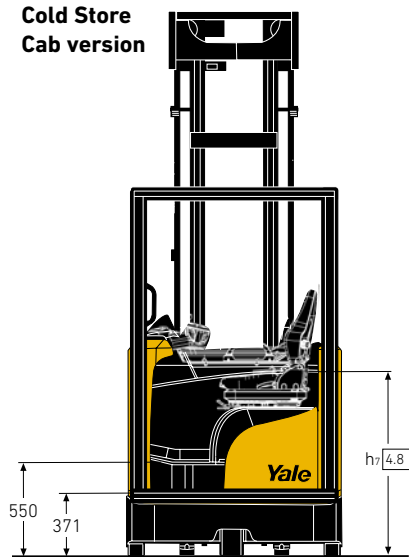


**TRUCK DIMENSIONS – MR SERIES**

**Cold Store Cab version**



**Cold Store Cab version**



## VDI 2198 – GENERAL SPECIFICATIONS – MR SERIES

		Yale					
		MR14	MR16	MR16N	MR20		
<b>GENERAL</b>	1.1	Manufacturer					
	1.2	Model designation					
	1.3	Drive	Electric (battery)				
	1.4	Operator type	Seated				
	1.5	Rated capacity/Rated load	Q (kg)	1.4	1.6	2.0	
	1.6	Load centre distance	c (mm)	600			
	1.8	Load distance, centre of drive axle to fork <sup>(9) (10) (16) (17)</sup>	x (mm)	258	308	202	343
	1.9	Wheelbase	y (mm)	1400	1450		1500
	<b>WEIGHT</b>	2.1	Service weight	kg	3495	3546	3498
2.3		Axle loading, unladen front/rear <sup>(5)</sup>	kg	2055/1440	2103/1443	1955/1543	2296/1504
2.4		Axle loading fork advanced, laden front/rear	kg	885/4010	810/4336	757/4341	770/5030
2.5		Axle loading fork retracted, laden front/rear	kg	1711/3184	1779/3367	1514/3584	1971/3829
<b>TYRES</b>		3.1	Tyres front/rear	NDIIThane			
	3.2	Tyre size, front	ø mm x mm	343 x 140			
	3.3	Tyre size, rear	ø mm x mm	285 x 100			
	3.5	Wheels, number front/rear (x = driven wheels)		1x/2			
	3.7	Tread, rear	b <sub>11</sub> (mm)	1155	1025	1155	
	<b>DIMENSIONS</b>	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)	2 / 4		
4.2		Height of mast, lowered	h <sub>1</sub> (mm)	2195			
4.3		Free lift	h <sub>2</sub> (mm)	1648		1582	
4.4		Lift	h <sub>3</sub> (mm)	5000		4650	
4.5		Height, mast extended <sup>(1)</sup>	h <sub>4</sub> (mm)	5563			
4.7		Height of overhead guard (cabin) <sup>(2) (12) (15)</sup>	h <sub>6</sub> (mm)	2175			
4.8		Seat height relating to SIP	h <sub>7</sub> (mm)	1082			
4.10		Height of wheel arms	h <sub>8</sub> (mm)	308			
4.19		Overall length	l <sub>1</sub> (mm)	2523	2629	2538	
4.20		Length to face of forks <sup>(16) (17)</sup>	l <sub>2</sub> (mm)	1373	1479	1388	
4.21		Overall width <sup>(3) (13) (14)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1265	1125	1265	
4.22		Fork dimensions DIN ISO 2331	s/e/l (mm)	40/80/1150	40/120/1150		
4.23		Fork carriage ISO 2328, class/type A, B		2A			
4.24		Fork-carriage width	b <sub>3</sub> (mm)	700			
4.25		Distance between fork-arms min/max <sup>(8)</sup>	b <sub>5</sub> (mm)	220/640	260/680		
4.26		Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	900	795	900	
4.28		Reach distance	l <sub>4</sub> (mm)	441	491	385	541
4.31		Ground clearance, laden, below mast	m <sub>1</sub> (mm)	75			
4.32		Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)	85			
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways <sup>(11) (16) (17)</sup>	Ast (mm)	2826	2834	2899	2857
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(11) (16) (17)</sup>	Ast (mm)	2895	2896	2976	2913	
4.35	Turning radius	Wa (mm)	1671	1718	1700	1767	
4.37	Length across wheel arms	l <sub>7</sub> (mm)	1795	1845	1895		
4.42	Step height (from ground to running board)	mm	550				
4.43	Step height (between intermediate steps between running board and floor)	mm	371				
<b>PERFORMANCE</b>	5.1	Travel speed, laden/unladen <sup>(7)</sup>	km/h	11/11 (14/14) <sup>(20)</sup>		11/11 (14/14)	
	5.1.1	Travel speed, laden/unladen, backwards <sup>(7)</sup>	km/h	11/11 (14/14) <sup>(20)</sup>		11/11 (14/14)	
	5.2	Lift speed, laden/unladen <sup>(7)</sup>	m/s	0.37/0.63 (0.47/0.73)		0.37/0.64	
	5.3	Lowering speed, laden/unladen	m/s	0.55		0.55/0.50	
	5.4	Reaching speed, laden/unladen	m/s	0.17/0.17			
	5.7	Gradeability, laden/unladen <sup>(7) (18)</sup>	%	7/10 (15/20)	7/10 (14/20)	12/20	
	5.8	Max. gradeability laden/unladen <sup>(7) (18)</sup>	%	15/20 (15/20)	14/20 (14/20)	12/20	
	5.9	Acceleration time laden/unladen <sup>(7)</sup>	s	3.3/3.3 (2.6/2.6)	3.4/3.4 (2.7/2.7)	2.6/2.5	
	5.10	Service brake		Electric			
	<b>ELECTRIC</b>	6.1	Drive motor S2 60 minute rating <sup>(7)</sup>	kW	5.4 (9.6) <sup>(19)</sup>		9.6
6.2		Lift motor, S3 15% rating <sup>(7)</sup>	kW	9.9 (14)		14	
6.3		Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	B	C	
6.4		Battery voltage/nominal capacity K5	(V) / (Ah)	48/700 <sup>(6)</sup>			
6.5		Battery weight <sup>(4)</sup>	kg	1119			
6.6		Energy consumption according to VDI cycle	kWh/h @ no. of cycles	2.72 (2.68)	3.01 (2.96)	3.90 (4.23)	
6.7		Turnover output according to VDI 2198 <sup>(7)</sup>	t/h	56 (60)	65 (68)	79 (79)	
6.8		Turnover efficiency according to VDI 2198 <sup>(7)</sup>	t/kWh	20 (18)	20 (20)	19 (18)	
<b>OTHER</b>	8.1	Type of drive unit	AC-Controller				
	10.1	Operating pressure for attachments	bar	180			
	10.2	Oil volume for attachment	l/min	20			
	10.7	Sound pressure level at the driver's seat	dB (A)	<69.7			

(1) With load backrest h<sub>4</sub> + 508mm MR14/MR16/MR16N/MR16HD), + 443mm (MR20/MR25/MR20HD)

(2) With beacon h<sub>6</sub> + 120mm. ; With OHG Grid Protector h<sub>6</sub> + 20mm; With OHG Screen Protector h<sub>6</sub> + 30mm

(3) With load wheels lateral covers: 1289mm (MR14/MR16/MR20/MR16HD), 1153mm (MR16N), 1373mm (MR25 MR20HD)

(4) These values may vary of +/- 5%

(5) Forks retracted

(6) See Batteries table

(7) Values in brackets are optional

(8) Side shift stroke is +/-75mm on all trucks. Reduced to +/-25mm for MR16N

(9) For models MR14-16 with mast 4 stage: x - 53mm

(10) For models MR20-25 with mast 4 stage: x - 108mm

(11) For Ast with mast 4 stage, see 'Mast table 4 stage 14-16' and 'Mast table 4 stage 20-25' MR16N

(12) With OHG Grid Protector h<sub>6</sub> + 30mm; with OHG Screen Protector h<sub>6</sub> + 45mm

## VDI 2198 – GENERAL SPECIFICATIONS – MR SERIES

		Yale				
		MR25	MR16HD	MR20HD		
<b>GENERAL</b>	1.1	Manufacturer				
	1.2	Model designation				
	1.3	Drive		Electric (battery)		
	1.4	Operator type		Seated		
	1.5	Rated capacity/Rated load	Q (kg)	2.5	1.6	2.0
	1.6	Load centre distance	c (mm)		600	
	1.8	Load distance, centre of drive axle to fork <sup>(9) (10) (16) (17)</sup>	x (mm)	436	293	315
	1.9	Wheelbase	y (mm)	1670	1450	1550
	<b>WEIGHT</b>	2.1	Service weight	kg	4230	4224
2.3		Axle loading, unladen front/rear <sup>(5)</sup>	kg	2565/1665	2428/1796	2577/2040
2.4		Axle loading fork advanced, laden front/rear	kg	876/5855	979/4845	985/5632
2.5		Axle loading fork retracted, laden front/rear	kg	2306/4424	2104/3720	2149/4468
<b>TYRES</b>		3.1	Tyres front/rear		NDIIThane	
	3.2	Tyre size, front	ø mm x mm	343 x 140		
	3.3	Tyre size, rear	ø mm x mm	350 x 140	285 x 100	350 x 110
	3.5	Wheels, number front/rear (x = driven wheels)			1x/2	
	3.7	Tread, rear	b <sub>11</sub> (mm)	1183	1155	1153
	<b>DIMENSIONS</b>	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)	2 / 4	
4.2		Height of mast, lowered	h <sub>1</sub> (mm)	2195	3227	
4.3		Free lift	h <sub>2</sub> (mm)	1582	2680	2614
4.4		Lift	h <sub>3</sub> (mm)	4650	7900	7750
4.5		Height, mast extended <sup>(1)</sup>	h <sub>4</sub> (mm)	5263	8463	8363
4.7		Height of overhead guard (cabin) <sup>(2) (12) (15)</sup>	h <sub>6</sub> (mm)		2175	
4.8		Seat height relating to SIP	h <sub>7</sub> (mm)		1082	
4.10		Height of wheel arms	h <sub>8</sub> (mm)	373	308	373
4.19		Overall length	l <sub>1</sub> (mm)	2615	2538	2615
4.20		Length to face of forks <sup>(16) (17)</sup>	l <sub>2</sub> (mm)	1465	1388	1465
4.21		Overall width <sup>(3) (13) (14)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1345	1265	1273
4.22		Fork dimensions DIN ISO 2331	s/e/l (mm)		40/120/1150	
4.23		Fork carriage ISO 2328, class/type A, B			2A	
4.24		Fork-carriage width	b <sub>3</sub> (mm)		700	
4.25		Distance between fork-arms min/max <sup>(8)</sup>	b <sub>5</sub> (mm)		260/680	
4.26		Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)		900	
4.28		Reach distance	l <sub>4</sub> (mm)	666	491	496
4.31		Ground clearance, laden, below mast	m <sub>1</sub> (mm)		75	
4.32		Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)		85	
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways <sup>(11) (16) (17)</sup>	Ast (mm)	2953	2845	2926
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(11) (16) (17)</sup>	Ast (mm)	2992	2909	2986	
4.35	Turning radius	Wa (mm)	1930	1718	1815	
4.37	Length across wheel arms	l <sub>7</sub> (mm)	2098	1845	1978	
4.42	Step height (from ground to running board)	mm		550		
4.43	Step height (between intermediate steps between running board and floor)	mm		371		
<b>PERFORMANCE</b>	5.1	Travel speed, laden/unladen <sup>(7)</sup>	km/h	11/11 (14/14)		
	5.1.1	Travel speed, laden/unladen, backwards <sup>(7)</sup>	km/h	11/11 (14/14)		
	5.2	Lift speed, laden/unladen <sup>(7)</sup>	m/s	0.30/0.64	0.42/0.73	0.37/0.68
	5.3	Lowering speed, laden/unladen	m/s	0.55/0.50	0.55	
	5.4	Reaching speed, laden/unladen	m/s		0.17 / 0.17	
	5.7	Gradeability, laden/unladen <sup>(7) (18)</sup>	%	10/18	12/18	11/16
	5.8	Max. gradeability laden/unladen <sup>(7) (18)</sup>	%	10/18	12/18	11/16
	5.9	Acceleration time laden/unladen <sup>(7)</sup>	s	2.7/2.6	2.6/2.5	2.7/2.6
	5.10	Service brake			Electric	
	<b>ELECTRIC</b>	6.1	Drive motor S2 60 minute rating <sup>(7)</sup>	kW	9.6	
6.2		Lift motor, S3 15% rating <sup>(7)</sup>	kW	14		
6.3		Battery according to DIN 43531 / 35 / 36 A,B,C, no		C		
6.4		Battery voltage/nominal capacity K5	(V) / (Ah)	48/840 <sup>(6)</sup>	48/700 <sup>(6)</sup>	48/840 <sup>(6)</sup>
6.5		Battery weight <sup>(4)</sup>	kg	1306	1119	1306
6.6		Energy consumption according to VDI cycle	kWh/h @ no. of cycles	4,08 (4,27)	-	
6.7		Turnover output according to VDI 2198 <sup>(7)</sup>	t/h	97 (97)	-	
6.8		Turnover efficiency according to VDI 2198 <sup>(7)</sup>	t/kWh	23 (22)	-	
<b>OTHER</b>	8.1	Type of drive unit		AC-Controller		
	10.1	Operating pressure for attachments	bar	180		
	10.2	Oil volume for attachment	l/min	20		
	10.7	Sound pressure level at the driver's seat	dB (A)	<69.7		

(13) For model MR16N with Work Lights on carriage 900mm: b<sub>1</sub> +113mm.

(14) With Work Lights on carriage 1100mm: for model MR16N: b<sub>1</sub> + 313mm for models MR14/MR16/MR20/MR16HD: b<sub>1</sub> + 173mm for models MR25 / MR20HD: b<sub>1</sub> + 93mm

(15) With PAL side line h<sub>6</sub> + 135mm, with Double Work Light to front h<sub>6</sub> + 220mm

(16) For model MR14 with h<sub>3</sub> <= 5500mm and battery 420Ah and Operator Shield Transparent (Lexan) / Wire Mesh Screen: l<sub>2</sub> + 72mm, x - 72mm, Ast 4.34.1 = 2770mm, Ast 4.34.2 = 2829mm

(17) For model MR16 with h<sub>3</sub> <= 5500mm and battery 420Ah and Operator Shield Transparent (Lexan)/ Wire Mesh Screen: l<sub>2</sub> + 72mm, x - 72 mm, Ast 4.34.1 = 2781mm, Ast 4.34.2 = 2830mm

(18) Gradeability grades based on motor thermal capacity, torque available and brake requirements

(19) Available traction motor 4kW for Russian market

(20) 9.5/9.5 with traction motor 4kw. All values are nominal values and they are subject to tolerances. For further information, please contact the manufacturer

**All values are nominal values and they are subject to tolerances.**

## MAST DIMENSIONS – MR14, MR16, MR16N

	Lift h <sub>3</sub> (mm)	Free lift h <sub>2</sub> (mm)	Height, mast lowered h <sub>1</sub> (mm)	Height, mast extended h <sub>4</sub> <sup>(1)</sup> (mm)	Weight <sup>(2)(3)</sup> (kg)	
3-Stage Full Free-Lift (FFL) Mast						
MR14, MR16	MR16N	5000	1648	2195	5563	911
		5250	1734	2281	5813	936
		5500	1820	2367	6063	961
		5750	1906	2453	6313	986
		6000	1992	2539	6563	1010
		6250	2078	2625	6813	1035
		6500	2164	2711	7063	1060
		6750	2250	2797	7313	1090
		7000	2336	2883	7563	1115
		7250	2422	2969	7813	1140
	7500	2508	3055	8063	1164	
	7750	2594	3141	8313	1220	
	8000	2680	3227	8563	1244	
	8250	2766	3313	8813	1269	
	8500	2852	3399	9063	1299	
	8750	2938	3485	9313	1324	
	9000	3024	3571	9563	1349	
		9250	3110	3657	9813	1376
		9500	3196	3743	10063	1407
		9750	3282	3829	10313	1431
	10000	3368	3915	10563	1460	
	10250	3454	4001	10813	1485	
	10500	3540	4087	11063	1509	
	10750	3626	4183	11313	1534	

(1) With load backrest 1000mm height, h<sub>4</sub> + 508mm; with load backrest 1500mm height, h<sub>4</sub> + 1008mm

(3) With load backrest 700mm width, 1000mm height, weight + 13kg; with load backrest 700mm width, 1500mm height, weight + 21kg

(2) All weights are: mast structures (weldment, cylinders, chain, pulley) + carriage + load backrest + oil. Excluded: forks, accessories

## MAST DIMENSIONS – MR16HD

Lift h <sub>3</sub> (mm)	Free lift h <sub>2</sub> (mm)	Height, mast lowered h <sub>1</sub> (mm)	Height, mast extended h <sub>4</sub> <sup>(1)</sup> (mm)	Weight <sup>(2)(3)</sup> (kg)
3-Stage Full Free-Lift (FFL) Mast				
7900	2680	3227	8463	1376
8150	2766	3313	8713	1404
8400	2852	3399	8963	1438
8650	2938	3485	9213	1467
8900	3024	3571	9463	1495
9150	3110	3657	9713	1523
9400	3196	3743	9963	1558
9650	3282	3839	10213	1586
9900	3368	3925	10463	1649
10150	3454	4011	10713	1677
10400	3540	4097	10963	1706
10650	3626	4183	11213	1734
10900	3712	4269	11463	1763
11150	3798	4355	11713	1791
11400	3884	4441	11963	1819

(1) With load backrest 1000mm height, h<sub>4</sub> + 508mm; with load backrest 1500mm height, h<sub>4</sub> + 1008mm

(3) With load backrest 700mm width, 1000mm height, weight + 13kg; with load backrest 700mm width, 1500mm height, weight + 21kg

(2) All weights are: mast structures (weldment, cylinders, chain, pulley) + carriage + load backrest + oil. Excluded: forks, accessories

## MAST DIMENSIONS – MR20, MR25

Lift h <sub>3</sub> (mm)	Free lift h <sub>2</sub> (mm)	Height, mast lowered h <sub>1</sub> (mm)	Height, mast extended h <sub>4</sub> <sup>(1)</sup> (mm)	Weight <sup>(2)(3)</sup> (kg)
3-Stage Full Free-Lift (FFL) Mast				
4650	1582	2195	5263	958
4900	1668	2281	5513	985
5150	1754	2367	5763	1012
5400	1840	2453	6013	1038
5650	1926	2539	6263	1065
5900	2012	2625	6513	1092
6150	2098	2711	6763	1118
6400	2184	2797	7013	1150
6650	2270	2883	7263	1177
6900	2356	2969	7513	1204
7150	2442	3055	7763	1230
7400	2528	3141	8013	1288
7650	2614	3227	8263	1314
7900	2700	3313	8513	1341
8150	2786	3399	8763	1373
8400	2873	3485	9013	1402
8650	2959	3571	9263	1431
8900	3045	3657	9513	1461
9150	3131	3753	9763	1490
9400	3217	3839	10013	1520
9650	3303	3925	10263	1549
9900	3389	4011	10513	1579
10150	3475	4097	10763	1608
10400	3561	4183	11013	1638

(1) With load backrest 1000mm height, h<sub>4</sub> + 508mm; with load backrest 1500mm height, h<sub>4</sub> + 1008mm

(3) With load backrest 700mm width, 1000mm height, weight + 13kg; with load backrest 700mm width, 1500mm height, weight + 21kg

(2) All weights are: mast structures (weldment, cylinders, chain, pulley) + carriage + load backrest + oil. Excluded: forks, accessories

## MAST DIMENSIONS – MR20HD

Lift h <sub>3</sub> (mm)	Free lift h <sub>2</sub> (mm)	Height, mast lowered h <sub>1</sub> (mm)	Height, mast extended h <sub>4</sub> <sup>(1)</sup> (mm)	Weight <sup>(2)(3)</sup> (kg)
3-Stage Full Free-Lift (FFL) Mast				
7750	2614	3227	8363	1402
8000	2700	3313	8613	1431
8250	2786	3399	8863	1465
8500	2872	3485	9113	1494
8750	2958	3571	9363	1523
9000	3044	3657	9613	1552
9250	3130	3753	9863	1587
9500	3216	3839	10113	1615
9750	3302	3925	10363	1678
10000	3388	4011	10613	1707
10250	3474	4097	10863	1736
10500	3560	4183	11113	1765
10750	3646	4269	11363	1793
11000	3732	4355	11613	1822
11250	3818	4441	11863	1851
11500	3904	4527	12113	1880
11750	3990	4613	12363	1908
12000	4076	4699	12613	1937
12250	4162	4785	12863	1966
12500	4248	4871	13113	1995
12750	4334	4957	13363	2024
13000	4420	5043	13613	2051
13250	4506	5129	13863	2080
13500	4592	5215	14113	2109
13750	4678	5301	14363	2138
14000	4764	5387	14613	2167

(1) With load backrest 1000mm height, h<sub>4</sub> + 508mm; with load backrest 1500mm height, h<sub>4</sub> + 1008mm

(3) With load backrest 700mm width, 1000mm height, weight + 13kg; with load backrest 700mm width, 1500mm height, weight + 21kg

(2) All weights are: mast structures (weldment, cylinders, chain, pulley) + carriage + load backrest + oil. Excluded: forks, accessories

All values are nominal values and they are subject to tolerances.

## MAST DIMENSIONS – MR14, MR16, MR16N

	Lift h <sub>3</sub> (mm)	Free lift h <sub>2</sub> (mm)	Height, mast lowered h <sub>1</sub> (mm)	Height, mast extended h <sub>4</sub> <sup>(1)</sup> (mm)	Weight <sup>(2)(3)</sup> (kg)	
4-Stage Full Free-Lift (FFL) Mast						
MR14, MR16	MR16N	6650	1700	2280	7230	1014
		7050	1800	2380	7630	1046
		7450	1900	2480	8030	1078
		7850	2000	2580	8430	1110
		8050	2050	2630	8630	1126
		8300	2150	2730	8880	1158
		8500	2200	2780	9080	1207
	MR14	8700	2250	2830	9280	1223
		9150	2400	2980	9730	1271
		9400	2500	3080	9980	1303
		9850	2650	3230	10430	1351
		10050	2700	3280	10630	1367

(1) With load backrest 1000mm height, h<sub>4</sub> + 508mm; with load backrest 1500mm height, h<sub>4</sub> + 1008mm

(3) With load backrest 700mm width, 1000mm height, weight + 13kg; with load backrest 700mm width, 1500mm height, weight + 21kg

(2) All weights are: mast structures (weldment, cylinders, chain, pulley) + carriage + oil. Excluded: forks, accessories

## MAST DIMENSIONS – MR14, MR16, MR16N

	Lift h <sub>3</sub> (mm)	Free lift h <sub>2</sub> (mm)	Height, mast lowered h <sub>1</sub> (mm)	Height, mast extended h <sub>4</sub> <sup>(1)</sup> (mm)	Weight <sup>(2)(3)</sup> (kg)	
4-Stage Full Free-Lift (FFL) Mast						
MR14, MR16	MR16	7050	1800	2380	7630	1295
		7450	1900	2480	8030	1335
		7850	2000	2580	8430	1375
	MR20HD	8050	2050	2630	8630	1395
		8300	2150	2730	8880	1435
		8500	2200	2780	9080	1490
		8700	2250	2830	9280	1510
		9150	2400	2980	9730	1570
		9400	2500	3080	9980	1610
		9850	2650	3230	10430	1670
		10050	2700	3280	10630	1690
		10300	2800	3380	10880	1730
		10500	2850	3430	11080	1750
		10750	2950	3530	11330	1790
11000	3050	3630	11580	1830		
11400	3150	3730	11980	1870		

(1) With load backrest 1000mm height, h<sub>4</sub> + 508 mm; with load backrest 1500mm height, h<sub>4</sub> + 1008mm

(3) With load backrest 700 mm width, 1000mm height, weight + 13kg; with load backrest 700mm width, 1500mm height, weight + 21kg

(2) All weights are: mast structures (weldment, cylinders, chain, pulley) + carriage + oil. Excluded: forks, accessories



## MAST INFORMATION – MR14

		MR14						
1.2	Model designation							
4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2757	2811	2757	2811	2867	2867
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2812	2877	2812	2877	2944	2944
6.3	Battery according to DIN 43531/35/36 A,B,C, no		C		C "Super"		C	C "Super"
6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	48/420	48/560	48/465	48/620	48/700	48/775
6.5	Battery weight <sup>(1)</sup>	kg	750	939	750	950	1119	1165

(1) These values may vary of +/- 5%

## MAST INFORMATION – MR16

		MR16						
1.2	Model designation							
4.34.1	Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2768	2820	2768	2820	2875	2875
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	2814	2879	2814	2879	2945	2945
6.3	Battery according to DIN 43531/35/36 A,B,C, no	C	C	C "Super"	C "Super"	C	C "Super"	
6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	48/420	48/560	48/465	48/620	48/700	48/775
6.5	Battery weight <sup>(1)</sup>	kg	750	939	750	950	1119	1165

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

## MAST INFORMATION – MR16N

		MR16N						
1.2	Model designation							
4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2801	2869	2801	2869	2941	2942
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2859	2941	2859	2941	3025	3025
6.3	Battery according to DIN 43531/35/36 A,B,C, no	B	B	B "Super"	B "Super"	B	B "Super"	
6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	48/420	48/560	48/465	48/620	48/700	48/775
6.5	Battery weight <sup>(1)</sup>	kg	746	937	750	945	1119	1135

(1) These values may vary of +/- 5%

## MAST INFORMATION – MR20

		MR20						
1.2	Model designation							
4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2884	2884	2940	2940		
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2946	2946	3012	3012		
6.3	Battery according to DIN 43531/35/36 A,B,C, no		C		C "Super"		C	C "Super"
6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	48/560	48/620	48/700	48/775		
6.5	Battery weight <sup>(1)</sup>	kg	939	950	1119	1165		

(1) These values may vary of +/- 5%

## MAST INFORMATION – MR25

		MR25						
1.2	Model designation							
4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2974	2974	3027	3027		
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	3024	3024	3089	3089		
6.3	Battery according to DIN 43531/35/36 A,B,C, no		C		C "Super"		C	C "Super"
6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	48/700	48/775	48/840	48/930		
6.5	Battery weight <sup>(1)</sup>	kg	1119	1165	1306	1368		

(1) These values may vary of +/- 5%

## MAST INFORMATION – MR20HD

		MR20HD						
1.2	Model designation							
4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2944	2944	3001	3001		
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	3017	3017	3084	3084		
6.3	Battery according to DIN 43531/35/36 A,B,C, no		C		C "Super"		C	C "Super"
6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	48/700	48/775	48/840	48/930		
6.5	Battery weight <sup>(1)</sup>	kg	1119	1165	1306	1368		

(1) These values may vary of +/- 5%

All values are nominal values and they are subject to tolerances.

## TRUCK DIMENSIONS FOR BATTERIES – MR14

GENERAL	1.2	MR14												
	1.8	402						330						258
WEIGHT	1.9	1400												
		1.2	Model designation											
	1.8	Load distance, centre of drive axle to fork												
	1.9	Wheelbase												
WEIGHT	2.1	kg	3112	3112	-	3309	3320	-	-	3495	3541	-	-	-
	2.3	kg	1977/1135	1977/1135	-	2025/1285	2032/1289	-	-	2055/1440	2084/1457	-	-	-
	2.4	kg	682/3830	682/3830	-	792/3917	800/3921	-	-	885/4010	914/4027	-	-	-
	2.5	kg	1778/2735	1778/2735	-	1753/2956	1760/2960	-	-	1711/3184	1741/3201	-	-	-
	2.5	kg	1778/2735	1778/2735	-	1753/2956	1760/2960	-	-	1711/3184	1741/3201	-	-	-
DIMENSIONS	4.19	li (mm)	2379	2379	2379	2451	2451	2451	2451	2523	2523	2523	2523	2595
	4.2	l2 (mm)	1229	1229	1229	1301	1301	1301	1301	1373	1373	1373	1373	1445
	4.28	l4 (mm)	585	585	585	513	513	513	513	441	441	441	441	441
	4.34.1	Ast (mm)	2718	2718	2718	2771	2771	2771	2771	2828	2826	2826	2826	2826
	4.34.2	Ast (mm)	2764	2764	2764	2829	2829	2829	2829	2895	2895	2895	2895	2895
	4.35	Wa (mm)	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671
	4.35	Wa (mm)	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671
ELECTRIC	6.3		C	C "Super"	No	C	C "Super"	No	No	C	C "Super"	No	No	No
	6.4	(V) / (Ah)	48/420	48/465	48/288 <sup>(1)</sup>	48/560	48/620	48/432 <sup>(1)</sup>	48/540 <sup>(1)</sup>	48/700	48/775	48/540 <sup>(1)</sup>	48/576 <sup>(1)</sup>	48/720 <sup>(1)</sup>
	6.5	kg	750	750	750	939	950	939	936	1119	1165	1107	1119	1107

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

All weights (2.1 to 2.5) are with lowest mast and standard forks

## TRUCK DIMENSIONS FOR BATTERIES – MR16

GENERAL	1.2	MR16												
	1.8	452						380						
WEIGHT	1.9	1450												
		1.2	Model designation											
	1.8	Load distance, centre of drive axle to fork												
	1.9	Wheelbase												
WEIGHT	2.1	kg	3162	3162	-	3360	3371	-	-	3546	3592	-	-	-
	2.3	kg	2018/1144	2018/1144	-	2069/1291	2077/1294	-	-	2103/1443	2133/1459	-	-	-
	2.4	kg	601/4162	601/4162	-	714/4246	721/4250	-	-	810/4336	839/4352	-	-	-
	2.5	kg	1853/2909	1853/2909	-	1825/3135	1832/3139	-	-	1779/3367	1809/3383	-	-	-
	2.5	kg	1853/2909	1853/2909	-	1825/3135	1832/3139	-	-	1779/3367	1809/3383	-	-	-
DIMENSIONS	4.19	li (mm)	2379	2379	2379	2451	2451	2451	2451	2523	2523	2523	2523	2523
	4.2	l2 (mm)	1229	1229	1229	1301	1301	1301	1301	1373	1373	1373	1373	1373
	4.28	l4 (mm)	635	635	635	563	563	563	563	491	491	491	491	491
	4.34.1	Ast (mm)	2731	2731	2731	2781	2781	2781	2781	2834	2834	2834	2834	2834
	4.34.2	Ast (mm)	2767	2767	2767	2830	2830	2830	2830	2896	2896	2896	2896	2896
	4.35	Wa (mm)	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718
	4.35	Wa (mm)	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718
ELECTRIC	6.3		C	C "Super"	No	C	C "Super"	No	No	C	C "Super"	No	No	No
	6.4	(V) / (Ah)	48/420	48/465	48/288 <sup>(1)</sup>	48/560	48/620	48/432 <sup>(1)</sup>	48/540 <sup>(1)</sup>	48/700	48/775	48/540 <sup>(1)</sup>	48/576 <sup>(1)</sup>	48/720 <sup>(1)</sup>
	6.5	kg	750	750	750	939	950	939	936	1119	1165	1107	1119	1107

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

All weights (2.1 to 2.5) are with lowest mast and standard forks

## TRUCK DIMENSIONS FOR BATTERIES – MR16N

GENERAL	1.2	MR16N												
	1.8	382						292						202
WEIGHT	1.9	1450												
		1.2	Model designation											
	1.8	Load distance, centre of drive axle to fork												
	1.9	Wheelbase												
WEIGHT	2.1	kg	3111	3115	-	3309	3317	-	-	-	-	3498	3514	-
	2.3	kg	1922/1189	1924/1191	-	1947/1362	1952/1365	-	-	-	-	1955/1543	1965/1549	-
	2.4	kg	569/4142	572/4143	-	672/4237	677/4240	-	-	-	-	757/4341	766/4347	-
	2.5	kg	1680/3032	1682/3033	-	1606/3303	1611/3306	-	-	-	-	1514/3584	1524/3590	-
	2.5	kg	1680/3032	1682/3033	-	1606/3303	1611/3306	-	-	-	-	1514/3584	1524/3590	-
DIMENSIONS	4.19	li (mm)	2449	2449	2449	2539	2539	2539	2539	2539	2539	2539	2629	2629
	4.2	l2 (mm)	1299	1299	1299	1389	1389	1389	1389	1389	1389	1389	1479	1479
	4.28	l4 (mm)	565	565	565	475	475	475	475	475	475	475	385	385
	4.34.1	Ast (mm)	2762	2762	2762	2828	2828	2828	2828	2828	2828	2828	2898	2898
	4.34.2	Ast (mm)	2811	2811	2811	2893	2893	2893	2893	2893	2893	2893	2976	2976
	4.35	Wa (mm)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
	4.35	Wa (mm)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
ELECTRIC	6.3		B	B "Super"	No	B	B "Super"	No	No	B	B "Super"	No	No	B
	6.4	(V) / (Ah)	48/420	48/465	48/288 <sup>(1)</sup>	48/560	48/620	48/360 <sup>(1)</sup>	48/432 <sup>(1)</sup>	48/700	48/775	48/540 <sup>(1)</sup>	48/576 <sup>(1)</sup>	48/720 <sup>(1)</sup>
	6.5	kg	746	750	746	937	945	937	937	1119	1135	1119	1135	

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

All weights (2.1 to 2.5) are with lowest mast and standard forks

## TRUCK DIMENSIONS FOR BATTERIES – MR16HD

GENERAL	1.2	MR16HD												
	1.8	308						293						
WEIGHT	1.9	1450												
		1.2	Model designation											
	1.8	Load distance, centre of drive axle to fork												
	1.9	Wheelbase												
WEIGHT	2.1	kg	4038	4049	-	-	4224	4270	-	-	-	-	-	-
	2.3	kg	2417/1621	2424/1625	-	-	2428/1796	2457/1813	-	-	-	-	-	-
	2.4	kg	883/4755	891/4758	-	-	979/4845	1009/4861	-	-	-	-	-	-
	2.5	kg	2172/3466	2180/3469	-	-	2104/3720	2134/3736	-	-	-	-	-	-
	2.5	kg	2172/3466	2180/3469	-	-	2104/3720	2134/3736	-	-	-	-	-	-
DIMENSIONS	4.19	li (mm)	2523	2523	2523	2523	2523	2523	2523	2523	2523	2523	2523	2523
	4.2	l2 (mm)	1373	1373	1373	1373	1388	1388	1388	1388	1388	1388	1388	1388
	4.28	l4 (mm)	491	491	491	491	491	491	491	491	491	491	491	491
	4.34.1	Ast (mm)	2834	2834	2834	2834	2845	2845	2845	2845	2845	2845	2845	2845
	4.34.2	Ast (mm)	2896	2896	2896	2896	2909	2909	2909	2909	2909	2909	2909	2909
	4.35	Wa (mm)	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718
	4.35	Wa (mm)	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718	1718
ELECTRIC	6.3		C	C "Super"	No	No	C	C "Super"	No	No	C	C "Super"	No	No
	6.4	(V) / (Ah)	48/560	48/620	48/432 <sup>(1)</sup>	48/540 <sup>(1)</sup>	48/700	48/775	48/540 <sup>(1)</sup>	48/576 <sup>(1)</sup>	48/700	48/775	48/540 <sup>(1)</sup>	48/720 <sup>(1)</sup>
	6.5	kg	939	950	936	936	1119	1165	1107	1119	1119	1107	1119	1107

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

All weights (2.1 to 2.5) are with lowest mast and standard forks

## TRUCK DIMENSIONS FOR BATTERIES – MR20

GENERAL	1.2	Model designation	MR20									
	1.8	Load distance, centre of drive axle to fork	x (mm)	415					343			
	1.9	Wheelbase	y (mm)	1500								
WEIGHT	2.1	Service weight	kg	3615	3626	-	-	3801	3847	-	-	-
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2261/1354	2268/1358	-	-	2296/1504	2326/1520	-	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	671/4943	679/4947	-	-	770/5030	801/5046	-	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	2032/3583	2039/3586	-	-	1971/3829	2002/3845	-	-	-
	DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2451	2451	2451	2451	2523	2523	2523	2523
4.2		Length to face of forks	l <sub>2</sub> (mm)	1316	1316	1316	1316	1388	1388	1388	1388	1388
4.28		Reach distance	l <sub>4</sub> (mm)	613	613	613	613	541	541	541	541	541
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2805	2805	2805	2805	2857	2857	2857	2857	2857
4.34.2		Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	2848	2848	2848	2848	2913	2912	2912	2912	2912
4.35		Turning radius	Wa (mm)	1767	1767	1767	1767	1767	1767	1767	1767	1767
ELECTRIC		6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no	C	C "Super"	No	No	C	C "Super"	No	No	No
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>
	6.5	Battery weight <sup>(1)</sup>	kg	939	950	936	936	1119	1165	1107	1119	1107

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

All weights (2.1 to 2.5) are with lowest mast and standard forks

## TRUCK DIMENSIONS FOR BATTERIES – MR20HD

GENERAL	1.2	Model designation	MR20HD									
	1.8	Load distance, centre of drive axle to fork	x (mm)	387					315			
	1.9	Wheelbase	y (mm)	1550								
WEIGHT	2.1	Service weight	kg	4425	4471	-	-	-	4617	4679	-	-
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2567/1858	2597/1874	-	-	-	2577/2040	2616/2063	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	891/5534	921/5550	-	-	-	985/5632	1024/5655	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	2235/4189	2266/4205	-	-	-	2149/4468	2189/4490	-	-
	DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2528	2528	2528	2528	2528	2600	2600	2600
4.2		Length to face of forks	l <sub>2</sub> (mm)	1393	1393	1393	1393	1393	1465	1465	1465	1465
4.28		Reach distance	l <sub>4</sub> (mm)	536	536	536	536	536	464	464	464	464
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2872	2872	2872	2872	2872	2926	2926	2926	2926
4.34.2		Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	2921	2921	2921	2921	2921	2986	2986	2986	2986
4.35		Turning radius	Wa (mm)	1815	1815	1815	1815	1815	1815	1815	1815	1815
ELECTRIC		6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no	C	C "Super"	No	No	No	C	C "Super"	No	No
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/840	48/930	48/720	
	6.5	Battery weight <sup>(1)</sup>	kg	1119	1165	1107	1119	1107	1306	1368	1255	

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

All weights (2.1 to 2.5) are with lowest mast and standard forks

## TRUCK DIMENSIONS FOR BATTERIES – MR25

GENERAL	1.2	Model designation	MR25									
	1.8	Load distance, centre of drive axle to fork	x (mm)	508					436			
	1.9	Wheelbase	y (mm)	1670								
WEIGHT	2.1	Service weight	kg	4038	4084	-	-	-	4230	4292	-	-
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2520/1518	2552/1532	-	-	-	2565/1665	2606/1686	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	773/5765	804/5780	-	-	-	876/5855	917/5875	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	2371/4167	2402/4182	-	-	-	2306/4424	2348/4444	-	-
	DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2528	2528	2528	2528	2528	2600	2600	2600
4.2		Length to face of forks	l <sub>2</sub> (mm)	1393	1393	1393	1393	1393	1465	1465	1465	1465
4.28		Reach distance	l <sub>4</sub> (mm)	738	738	738	738	738	666	666	666	666
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2906	2906	2906	2906	2906	2953	2953	2953	2953
4.34.2		Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	2929	2929	2929	2929	2929	2992	2992	2992	2992
4.35		Turning radius	Wa (mm)	1930	1930	1930	1930	1930	1930	1930	1930	1930
ELECTRIC		6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no	C	C "Super"	No	No	No	C	C "Super"	No	No
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/840	48/930	48/720	
	6.5	Battery weight <sup>(1)</sup>	kg	1119	1165	1107	1119	1107	1306	1368	1255	

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

All weights (2.1 to 2.5) are with lowest mast and standard forks

All values are nominal values and they are subject to tolerances.

## COLD STORE CABIN DIMENSIONS FOR BATTERIES – MR14

GENERAL	1.2	MR14													
	1.8	330						258							
WEIGHT	1.9	1400													
		1.2	Model designation												
	1.8	Load distance, centre of drive axle to fork <sup>(1)</sup>													
	1.9	Wheelbase													
WEIGHT	2.1	Service weight <sup>(4)</sup>	kg	3362	3362	-	3560	3571	-	-	3745	3791	-	-	-
	2.3	Axle loading, unladen front/rear <sup>(5)</sup>	kg	2164/1198	2164/1198	-	2231/1329	2238/1333	-	-	2261/1484	2209/1501	-	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	932/3830	932/3830	-	998/3961	1006/3965	-	-	1091/4054	1120/4071	-	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	1893/2869	1893/2869	-	1959/3000	1966/3004	-	-	1917/3228	1947/3245	-	-	-
	4.7	Height of overhead guard (cabin) <sup>(4)</sup>	h <sub>a</sub> (mm)	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245
DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2605	2605	2605	2605	2605	2605	2605	2605	2677	2677	2677	2677
	4.2	Length to face of forks <sup>(2)</sup>	l <sub>2</sub> (mm)	1455	1455	1455	1455	1455	1455	1455	1527	1527	1527	1527	1527
	4.28	Reach distance	l <sub>4</sub> (mm)	513	513	513	513	513	513	513	441	441	441	441	441
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2895	2895	2895	2895	2895	2895	2895	2950	2950	2950	2950	2950
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	2955	2955	2955	2955	2955	2955	2955	3021	3021	3021	3021	3021
	4.35	Turning radius	Wa (mm)	1787	1787	1787	1787	1787	1787	1787	1787	1787	1787	1787	1787
	4.37	Length across wheel arms	l <sub>3</sub> (mm)	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949
	ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	C	C "Super"	No	No	C	C "Super"	No	No
6.4		Battery voltage/nominal capacity K5	(V) / (Ah)	48/420	48/465	48/288 <sup>(3)</sup>	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>
6.5		Battery weight <sup>(1)</sup>	kg	750	750	939	950	939	936	1119	1165	1107	1119	1107	

- (1) These values may vary of +/- 5%.  
 (2) For model R20/MR20 with h<sub>3</sub> = 4650 mm, battery 560 Ah and Cold Store Cab: l<sub>2</sub> + 72 mm, x - 72 mm, Ast 4.34.1 = 2857 mm, Ast 4.34.2 = 2913 mm  
 (3) Li-Ion battery  
 (4) With OGH GRID PROTECTOR +45 mm; With WORK LIGHTS to MAST +125 mm; With WORK LIGHTS to FRONT +145 mm.; With PAL (Red Line) on Std/Nrw +65 mm; With PAL (Red Line) on DriveIN 185 mm; With BEACON +65 mm  
 (5) Forks retracted  
 (6) Cold Store Cabin STD with GLASS Screens / Cold Store Cabin STD with POLICARBONATE Screens: 58kg less  
 All weights (2.1 to 2.5) are with lowest mast and standard forks

## COLD STORE CABIN DIMENSIONS FOR BATTERIES – MR16

GENERAL	1.2	MR16													
	1.8	380						202							
WEIGHT	1.9	1450													
		1.2	Model designation												
	1.8	Load distance, centre of drive axle to fork <sup>(1)</sup>													
	1.9	Wheelbase													
WEIGHT	2.1	Service weight <sup>(4)</sup>	kg	3412	3412	-	3610	3621	-	-	3796	3842	-	-	-
	2.3	Axle loading, unladen front/rear <sup>(5)</sup>	kg	2206/1206	2206/1206	-	2273/1337	2281/1340	-	-	2307/1489	2337/1505	-	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	851/4162	851/4162	-	918/4292	925/4296	-	-	1014/4382	1043/4398	-	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	1962/3051	1962/3051	-	2029/3181	2036/3185	-	-	1983/3413	2013/3429	-	-	-
	4.7	Height of overhead guard (cabin) <sup>(4)</sup>	h <sub>a</sub> (mm)	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245
DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2605	2605	2605	2605	2605	2605	2605	2677	2677	2677	2677	
	4.2	Length to face of forks <sup>(2)</sup>	l <sub>2</sub> (mm)	1455	1455	1455	1455	1455	1455	1455	1527	1527	1527	1527	
	4.28	Reach distance	l <sub>4</sub> (mm)	563	563	563	563	563	563	563	491	491	491	491	
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2905	2905	2905	2905	2905	2905	2905	2959	2959	2959	2959	
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	2956	2956	2956	2956	2956	2956	2956	3022	3022	3022	3022	
	4.35	Turning radius	Wa (mm)	1834	1834	1834	1834	1834	1834	1834	1834	1834	1834	1834	
	4.37	Length across wheel arms	l <sub>3</sub> (mm)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	
	ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	C	C "Super"	No	No	C	C "Super"	No	No
6.4		Battery voltage/nominal capacity K5	(V) / (Ah)	48/420	48/465	48/288 <sup>(3)</sup>	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>
6.5		Battery weight <sup>(1)</sup>	kg	750	750	939	950	939	936	1119	1165	1107	1119	1107	

- (1) These values may vary of +/- 5%.  
 (2) For model R20/MR20 with h<sub>3</sub> = 4650 mm, battery 560 Ah and Cold Store Cab: l<sub>2</sub> + 72 mm, x - 72 mm, Ast 4.34.1 = 2857 mm, Ast 4.34.2 = 2913 mm  
 (3) Li-Ion battery  
 (4) With OGH GRID PROTECTOR +45 mm; With WORK LIGHTS to MAST +125 mm; With WORK LIGHTS to FRONT +145 mm.; With PAL (Red Line) on Std/Nrw +65 mm; With PAL (Red Line) on DriveIN 185 mm; With BEACON +65 mm  
 (5) Forks retracted  
 (6) Cold Store Cabin STD with GLASS Screens / Cold Store Cabin STD with POLICARBONATE Screens: 58kg less  
 All weights (2.1 to 2.5) are with lowest mast and standard forks

## COLD STORE CABIN DIMENSIONS FOR BATTERIES – MR16N

GENERAL	1.2	MR16N													
	1.8	292						202							
WEIGHT	1.9	1450													
		1.2	Model designation												
	1.8	Load distance, centre of drive axle to fork <sup>(1)</sup>													
	1.9	Wheelbase													
WEIGHT	2.1	Service weight <sup>(4)</sup>	kg	3351	3351	-	3549	3557	-	-	3738	3754	-	-	-
	2.3	Axle loading, unladen front/rear <sup>(5)</sup>	kg	2162/1189	2162/1189	-	2147/1402	2152/1405	-	-	2155/1583	2165/1589	-	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	809/4142	809/4142	-	872/4277	877/4280	-	-	957/4381	966/4387	-	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	1920/3032	1920/3032	-	1806/3343	1811/3346	-	-	1714/3624	1724/3630	-	-	-
	4.7	Height of overhead guard (cabin) <sup>(4)</sup>	h <sub>a</sub> (mm)	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245	2245
DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2693	2693	2693	2693	2693	2693	2693	2693	2693	2693	2693	
	4.2	Length to face of forks <sup>(2)</sup>	l <sub>2</sub> (mm)	1543	1543	1543	1543	1543	1543	1543	1543	1543	1633	1633	
	4.28	Reach distance	l <sub>4</sub> (mm)	475	475	475	475	475	475	475	475	475	385	385	
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2936	2936	2936	2936	2936	2936	2936	2936	2936	3007	3007	
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	3002	3002	3002	3002	3002	3002	3002	3002	3002	3085	3085	
	4.35	Turning radius	Wa (mm)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	
	4.37	Length across wheel arms	l <sub>3</sub> (mm)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	
	ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		B	B "Super"	No	B	B "Super"	No	No	B	B "Super"	No	No
6.4		Battery voltage/nominal capacity K5	(V) / (Ah)	48/420	48/465	48/288 <sup>(3)</sup>	48/560	48/620	48/360 <sup>(3)</sup>	48/432 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	
6.5		Battery weight <sup>(1)</sup>	kg	746	750	937	945	937	945	1119	1135	1119	1135		

- (1) These values may vary of +/- 5%.  
 (2) For model R20/MR20 with h<sub>3</sub> = 4650 mm, battery 560 Ah and Cold Store Cab: l<sub>2</sub> + 72 mm, x - 72 mm, Ast 4.34.1 = 2857 mm, Ast 4.34.2 = 2913 mm  
 (3) Li-Ion battery  
 (4) With OGH GRID PROTECTOR +45 mm; With WORK LIGHTS to MAST +125 mm; With WORK LIGHTS to FRONT +145 mm.; With PAL (Red Line) on Std/Nrw +65 mm; With PAL (Red Line) on DriveIN 185 mm; With BEACON +65 mm  
 (5) Forks retracted  
 (6) Cold Store Cabin STD with GLASS Screens / Cold Store Cabin STD with POLICARBONATE Screens: 58kg less  
 All weights (2.1 to 2.5) are with lowest mast and standard forks

## COLD STORE CABIN DIMENSIONS FOR BATTERIES – MR16HD

GENERAL	1.2	Model designation	MR16HD									
	1.8	Load distance, centre of drive axle to fork <sup>(1)</sup>	x (mm)	248								
	1.9	Wheelbase	y (mm)	1450								
WEIGHT	2.1	Service weight <sup>(4)</sup>	kg	4288	4299	-	-	4474	4520	-	-	-
	2.3	Axle loading, unladen front/rear <sup>(5)</sup>	kg	2561/1727	2568/1731	-	-	2626/1848	2655/1865	-	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	978/4910	986/4913	-	-	1177/4897	1207/4913	-	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	2267/3621	2275/3624	-	-	2302/3772	2332/3788	-	-	-
	4.7	Height of overhead guard (cabin) <sup>(4)</sup>	h <sub>a</sub> (mm)	2245	2245	2245	2245	2245	2245	2245	2245	2245
DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2722	2722	2722	2722	2722	2722	2722	2722	2722
	4.2	Length to face of forks <sup>(2)</sup>	l <sub>2</sub> (mm)	1587	1587	1587	1587	1587	1587	1587	1587	1587
	4.28	Reach distance	l <sub>4</sub> (mm)	446	446	446	446	446	446	446	446	446
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2996	2996	2996	2996	2996	2996	2996	2996	2996
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	3067	3067	3067	3067	3067	3067	3067	3067	3067
	4.35	Turning radius	Wa (mm)	1834	1834	1834	1834	1834	1834	1834	1834	1834
	4.37	Length across wheel arms	l <sub>7</sub> (mm)	1999	1999	1999	1999	1999	1999	1999	1999	1999
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no	C	C "Super"	No	No	C	C "Super"	No	No	No	
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>
	6.5	Battery weight <sup>(1)</sup>	kg	939	950	936	936	1119	1165	1107	1119	1107

- (1) These values may vary of +/- 5%.  
 (2) For model R20/MR20 with h<sub>3</sub> = 4650 mm, battery 560 Ah and Cold Store Cab: l<sub>2</sub> + 72 mm, x - 72 mm, Ast 4.34.1 = 2857 mm, Ast 4.34.2 = 2913 mm  
 (3) Li-Ion battery  
 (4) With OGH GRID PROTECTOR +45 mm; With WORK LIGHTS to MAST +125 mm; With WORK LIGHTS to FRONT +145 mm.; With PAL (Red Line) on Std/Nrw +65 mm; With PAL (Red Line) on DriveIN 185 mm; With BEACON +65 mm  
 (5) Forks retracted  
 (6) Cold Store Cabin STD with GLASS Screens / Cold Store Cabin STD with POLICARBONATE Screens: 58kg less  
 All weights (2.1 to 2.5) are with lowest mast and standard forks

## COLD STORE CABIN DIMENSIONS FOR BATTERIES – MR20

GENERAL	1.2	Model designation	MR16HD									
	1.8	Load distance, centre of drive axle to fork <sup>(1)</sup>	x (mm)	248								
	1.9	Wheelbase	y (mm)	1450								
WEIGHT	2.1	Service weight <sup>(4)</sup>	kg	4288	4299	-	-	4474	4520	-	-	-
	2.3	Axle loading, unladen front/rear <sup>(5)</sup>	kg	2561/1727	2568/1731	-	-	2626/1848	2655/1865	-	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	978/4910	986/4913	-	-	1177/4897	1207/4913	-	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	2267/3621	2275/3624	-	-	2302/3772	2332/3788	-	-	-
	4.7	Height of overhead guard (cabin) <sup>(4)</sup>	h <sub>a</sub> (mm)	2245	2245	2245	2245	2245	2245	2245	2245	2245
DIMENSIONS	4.19	Overall length	l <sub>1</sub> (mm)	2722	2722	2722	2722	2722	2722	2722	2722	2722
	4.2	Length to face of forks <sup>(2)</sup>	l <sub>2</sub> (mm)	1587	1587	1587	1587	1587	1587	1587	1587	1587
	4.28	Reach distance	l <sub>4</sub> (mm)	446	446	446	446	446	446	446	446	446
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	2996	2996	2996	2996	2996	2996	2996	2996	2996
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	3067	3067	3067	3067	3067	3067	3067	3067	3067
	4.35	Turning radius	Wa (mm)	1834	1834	1834	1834	1834	1834	1834	1834	1834
	4.37	Length across wheel arms	l <sub>7</sub> (mm)	1999	1999	1999	1999	1999	1999	1999	1999	1999
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no	C	C "Super"	No	No	C	C "Super"	No	No	No	
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>
	6.5	Battery weight <sup>(1)</sup>	kg	939	950	936	936	1119	1165	1107	1119	1107

- (1) These values may vary of +/- 5%.  
 (2) For model R20/MR20 with h<sub>3</sub> = 4650 mm, battery 560 Ah and Cold Store Cab: l<sub>2</sub> + 72 mm, x - 72 mm, Ast 4.34.1 = 2857 mm, Ast 4.34.2 = 2913 mm  
 (3) Li-Ion battery  
 (4) With OGH GRID PROTECTOR +45 mm; With WORK LIGHTS to MAST +125 mm; With WORK LIGHTS to FRONT +145 mm.; With PAL (Red Line) on Std/Nrw +65 mm; With PAL (Red Line) on DriveIN 185 mm; With BEACON +65 mm  
 (5) Forks retracted  
 (6) Cold Store Cabin STD with GLASS Screens / Cold Store Cabin STD with POLICARBONATE Screens: 58kg less  
 All weights (2.1 to 2.5) are with lowest mast and standard forks

All values are nominal values and they are subject to tolerances.

## COLD STORE CABIN DIMENSIONS FOR BATTERIES – MR20HD

GENERAL	1.2	Model designation	MR20HD								
	1.8	Load distance, centre of drive axle to fork <sup>(1)</sup>	x (mm)	343					316		
	1.9	Wheelbase	y (mm)	1550							
WEIGHT	2.1	Service weight <sup>(4)</sup>	kg	4675	4721	-	-	-	4867	4929	-
	2.3	Axle loading, unladen front/rear <sup>(5)</sup>	kg	2704/1971	2734/1987	-	-	-	2768/2099	2807/2122	-
	2.4	Axle loading fork advanced, laden front/rear	kg	968/5707	998/5723	-	-	-	1176/5691	1215/5714	-
	2.5	Axle loading fork retracted, laden front/rear	kg	2312/4362	2343/4378	-	-	-	2340/4527	2380/4549	-
	DIMENSIONS	4.7	Height of overhead guard (cabin) <sup>(4)</sup>	h <sub>a</sub> (mm)	2245	2245	2245	2245	2245	2245	2245
4.19		Overall length	l <sub>1</sub> (mm)	2727	2727	2727	2727	2727	2754	2754	2754
4.2		Length to face of forks <sup>(2)</sup>	l <sub>2</sub> (mm)	1592	1592	1592	1592	1592	1619	1619	1619
4.28		Reach distance	l <sub>4</sub> (mm)	491	491	491	491	491	464	464	464
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	3024	3024	3024	3024	3024	3044	3044	3044
4.34.2		Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	3080	3080	3080	3080	3080	3104	3104	3104
4.35		Turning radius	Wa (mm)	1934	1934	1934	1934	1934	1934	1934	1934
4.37		Length across wheel arms	l <sub>7</sub> (mm)	2132	2132	2132	2132	2132	2132	2132	2132
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	No	No	C	C "Super"	No
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/840	48/930	48/720
	6.5	Battery weight <sup>(1)</sup>	kg	1119	1165	1107	1119	1107	1306	1368	1255

- (1) These values may vary of +/- 5%.

(2) For model R20/MR20 with h<sub>3</sub> = 4650 mm, battery 560 Ah and Cold Store Cab: l<sub>2</sub> + 72 mm, x - 72 mm, Ast 4.34.1 = 2857 mm, Ast 4.34.2 = 2913 mm

(3) Li-Ion battery

(4) With OGH GRID PROTECTOR +45 mm; With WORK LIGHTS to MAST +125 mm; With WORK LIGHTS to FRONT +145 mm.; With PAL (Red Line) on Std/Nrw +65 mm; With PAL (Red Line) on DriveIN 185 mm; With BEACON +65 mm

(5) Forks retracted

(6) Cold Store Cabin STD with GLASS Screens / Cold Store Cabin STD with POLICARBONATE Screens: 58kg less

All weights (2.1 to 2.5) are with lowest mast and standard forks

## COLD STORE CABIN DIMENSIONS FOR BATTERIES – MR25

GENERAL	1.2	Model designation	MR25								
	1.8	Load distance, centre of drive axle to fork <sup>(1)</sup>	x (mm)	508					436		
	1.9	Wheelbase	y (mm)	1670							
WEIGHT	2.1	Service weight <sup>(4)</sup>	kg	4288	4334	-	-	-	4480	4542	-
	2.3	Axle loading, unladen front/rear <sup>(5)</sup>	kg	2709/1579	2741/1593	-	-	-	2754/1726	2795/1747	-
	2.4	Axle loading fork advanced, laden front/rear	kg	962/5862	993/5841	-	-	-	1065/5916	1106/5936	-
	2.5	Axle loading fork retracted, laden front/rear	kg	2560/4228	2591/4243	-	-	-	2495/4485	2537/4505	-
	DIMENSIONS	4.7	Height of overhead guard (cabin) <sup>(4)</sup>	h <sub>a</sub> (mm)	2245	2245	2245	2245	2245	2245	2245
4.19		Overall length	l <sub>1</sub> (mm)	2682	2682	2682	2682	2682	2754	2754	2754
4.2		Length to face of forks <sup>(2)</sup>	l <sub>2</sub> (mm)	1547	1547	1547	1547	1547	1619	1619	1619
4.28		Reach distance	l <sub>4</sub> (mm)	738	738	738	738	738	666	666	666
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways <sup>(2)</sup>	Ast (mm)	3030	3030	3030	3030	3030	3077	3077	3077
4.34.2		Aisle width for pallets 800mm x 1200mm lengthwise <sup>(2)</sup>	Ast (mm)	3053	3053	3053	3053	3053	3116	3116	3116
4.35		Turning radius	Wa (mm)	2054	2054	2054	2054	2054	2054	2054	2054
4.37		Length across wheel arms	l <sub>7</sub> (mm)	2283	2283	2283	2283	2283	2283	2283	2283
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	No	No	C	C "Super"	No
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/840	48/930	48/720
	6.5	Battery weight <sup>(1)</sup>	kg	1119	1165	1107	1119	1107	1306	1368	1255

- (1) These values may vary of +/- 5%.

(2) For model R20/MR20 with h<sub>3</sub> = 4650 mm, battery 560 Ah and Cold Store Cab: l<sub>2</sub> + 72 mm, x - 72 mm, Ast 4.34.1 = 2857 mm, Ast 4.34.2 = 2913 mm

(3) Li-Ion battery

(4) With OGH GRID PROTECTOR +45 mm; With WORK LIGHTS to MAST +125 mm; With WORK LIGHTS to FRONT +145 mm.; With PAL (Red Line) on Std/Nrw +65 mm; With PAL (Red Line) on DriveIN 185 mm; With BEACON +65 mm

(5) Forks retracted

(6) Cold Store Cabin STD with GLASS Screens / Cold Store Cabin STD with POLICARBONATE Screens: 58kg less

All weights (2.1 to 2.5) are with lowest mast and standard forks

## WIDE DIMENSIONS FOR BATTERIES – MR16

GENERAL	1.2	MR16													
		1.8	Load distance, centre of drive axle to fork	452							380				
1.9	Wheelbase	1450													
WEIGHT	2.1	Service weight	kg	3214	3214	3214	3409	3409	-	-	3571	3571	-	-	-
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2062/1172	2062/1172	2062/1172	2096/1313	2096/1313	-	-	2093/1478	2093/1478	-	-	-
	2.4	Axle loading fork advanced, laden front/rear	kg	592/4242	592/4242	592/4242	690/4319	690/4319	-	-	728/4444	728/4444	-	-	-
	2.5	Axle loading fork retracted, laden front/rear	kg	1862/2973	1862/2973	1862/2973	1816/3193	1816/3193	-	-	1710/3462	1710/3462	-	-	-
	4.19	Overall length	li (mm)	2379	2379	2379	2451	2451	2451	2523	2523	2523	2523	2523	2523
DIMENSIONS	4.2	Length to face of forks	l <sub>2</sub> (mm)	1229	1229	1229	1301	1301	1301	1373	1373	1373	1373	1373	1373
	4.21	Overall width <sup>(5)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1465											
	4.23	Fork carriage ISO 2328, class/type A, B		2A											
	4.24	Fork-carriage width	b <sub>3</sub> (mm)	900											
	4.25	Distance between fork-arms MIN/MAX <sup>(2)</sup>	b <sub>5</sub> (mm)	260/884											
	4.26	Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	1095											
	4.28	Reach distance	l <sub>4</sub> (mm)	635	635	635	563	563	563	563	491	491	491	491	491
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2731	2731	2731	2781	2781	2781	2781	2834	2834	2834	2834	2834
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2766	2766	2766	2830	2830	2830	2830	2896	2896	2896	2896	2896
	4.35	Turning radius	Wa (mm)	1720											
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	C	C "Super"	No	No	C	C "Super"	No	No	No
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/420	48/465	48/288 <sup>(3)</sup>	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>
	6.5	Battery weight <sup>(1)</sup>	kg	750	750	750	939	950	939	936	1119	1165	1107	1119	1107

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

(5) With load wheels lateral covers: 1489 mm (Wide), 1689 mm (Extra Wide)

All weights (2.1 to 2.5) are with lowest mast and standard forks

## WIDE DIMENSIONS FOR BATTERIES – MR16HD

GENERAL	1.2	MR16HD													
		1.8	Load distance, centre of drive axle to fork	308							293				
1.9	Wheelbase	1450													
WEIGHT	2.1	Service weight	kg	4141	4141	-	-	4304	4304	-	-	-	-	-	
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2502/1639	2502/1639	-	-	2468/1836	2468/1836	-	-	-	-	-	
	2.4	Axle loading fork advanced, laden front/rear	kg	1172/4568	1172/4568	-	-	929/4974	929/4974	-	-	-	-	-	
	2.5	Axle loading fork retracted, laden front/rear	kg	2215/3525	2215/3525	-	-	2077/3826	2077/3826	-	-	-	-	-	
	4.19	Overall length	li (mm)	2523	2523	2523	2523	2523	2523	2523	2523	2523	2523	2523	
DIMENSIONS	4.2	Length to face of forks	l <sub>2</sub> (mm)	1373	1373	1373	1373	1388	1388	1388	1388	1388	1388	1388	
	4.21	Overall width <sup>(5)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1465											
	4.23	Fork carriage ISO 2328, class/type A, B		2A											
	4.24	Fork-carriage width	b <sub>3</sub> (mm)	900											
	4.25	Distance between fork-arms MIN/MAX <sup>(2)</sup>	b <sub>5</sub> (mm)	260/884											
	4.26	Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	1095											
	4.28	Reach distance	l <sub>4</sub> (mm)	491	491	491	491	491	491	491	491	491	491	491	
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2834	2834	2834	2834	2845	2845	2845	2845	2845	2845	2845	
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2896	2896	2896	2896	2909	2909	2909	2909	2909	2909	2909	
	4.35	Turning radius	Wa (mm)	1720											
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	No	C	C "Super"	No	No	No	No	No	
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/720 <sup>(3)</sup>		
	6.5	Battery weight <sup>(1)</sup>	kg	939	950	936	936	1119	1165	1107	1119	1107			

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

(5) With load wheels lateral covers: 1489 mm (Wide), 1689 mm (Extra Wide)

All weights (2.1 to 2.5) are with lowest mast and standard forks

## WIDE DIMENSIONS FOR BATTERIES – MR20

GENERAL	1.2	MR20													
		1.8	Load distance, centre of drive axle to fork	415							343				
1.9	Wheelbase	1500													
WEIGHT	2.1	Service weight	kg	3715	3715	-	-	3878	3878	-	-	-	-	-	
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2329/1386	2329/1386	-	-	2327/1551	2327/1551	-	-	-	-	-	
	2.4	Axle loading fork advanced, laden front/rear	kg	672/5043	672/5043	-	-	707/5171	707/5171	-	-	-	-	-	
	2.5	Axle loading fork retracted, laden front/rear	kg	2054/3661	2054/3661	-	-	1927/3951	1927/3951	-	-	-	-	-	
	4.19	Overall length	li (mm)	2451	2451	2451	2451	2523	2523	2523	2523	2523	2523	2523	
DIMENSIONS	4.2	Length to face of forks	l <sub>2</sub> (mm)	1316	1316	1316	1316	1388	1388	1388	1388	1388	1388	1388	
	4.21	Overall width <sup>(5)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1465											
	4.23	Fork carriage ISO 2328, class/type A, B		2A											
	4.24	Fork-carriage width	b <sub>3</sub> (mm)	900											
	4.25	Distance between fork-arms MIN/MAX <sup>(2)</sup>	b <sub>5</sub> (mm)	260/884											
	4.26	Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	1095											
	4.28	Reach distance	l <sub>4</sub> (mm)	613	613	613	613	541	541	541	541	541	541	541	
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2806	2806	2806	2806	2858	2858	2858	2858	2858	2858	2858	
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2849	2849	2849	2849	2914	2914	2914	2914	2914	2914	2914	
	4.35	Turning radius	Wa (mm)	1768											
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	No	C	C "Super"	No	No	No	No	No	
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/720 <sup>(3)</sup>		
	6.5	Battery weight <sup>(1)</sup>	kg	939	950	936	936	1119	1165	1107	1119	1107			

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

(5) With load wheels lateral covers: 1489 mm (Wide), 1689 mm (Extra Wide)

All weights (2.1 to 2.5) are with lowest mast and standard forks

All values are nominal values and they are subject to tolerances.

## EXTRA WIDE DIMENSIONS FOR BATTERIES – MR16

GENERAL	Model designation	MR16													
		1.2	Model designation												
1.8	Load distance, centre of drive axle to fork	x (mm)	452					380							
1.9	Wheelbase	y (mm)	1450												
WEIGHT	2.1	Service weight	kg	3331	3331	3331	3506	3506			3661	3661			
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2127/1204	2127/1204	2127/1204	2158/1348	2158/1348			2138/1523	2138/1523			
	2.4	Axle loading fork advanced, laden front/rear	kg	630/4301	630/4301	630/4301	728/4378	728/4378			740/4522	740/4522			
	2.5	Axle loading fork retracted, laden front/rear	kg	1920/3011	1920/3011	1920/3011	1872/3234	1872/3234			1738/3523	1738/3523			
	4.19	Overall length	l <sub>1</sub> (mm)	2379	2379	2379	2451	2451	2451	2451	2523	2523	2523	2523	2523
DIMENSIONS	4.2	Length to face of forks	l <sub>2</sub> (mm)	1229	1229	1229	1301	1301	1301	1301	1373	1373	1373	1373	1373
	4.21	Overall width <sup>(5)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1665											
	4.23	Fork carriage ISO 2328, class/type A, B		2A											
	4.24	Fork-carriage width	b <sub>3</sub> (mm)	1100											
	4.25	Distance between fork-arms MIN/MAX <sup>(2)</sup>	b <sub>5</sub> (mm)	260/1078											
	4.26	Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	1295											
	4.28	Reach distance	l <sub>4</sub> (mm)	635	635	635	563	563	563	563	491	491	491	491	491
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2780	2780	2780	2830	2830	2830	2830	2883	2883	2883	2883	2883
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2815	2815	2815	2879	2879	2879	2879	2945	2945	2945	2945	2945
	4.35	Turning radius	Wa (mm)	1767											
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	C	C "Super"	No	C	C "Super"	No	No	No	
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/420	48/465	48/288 <sup>(3)</sup>	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>
	6.5	Battery weight <sup>(1)</sup>	kg	750	750	750	939	950	939	936	1119	1165	1107	1119	1107

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

(5) With load wheels lateral covers: 1489 mm (Wide), 1689 mm (Extra Wide)

All weights (2.1 to 2.5) are with lowest mast and standard forks

## EXTRA WIDE DIMENSIONS FOR BATTERIES – MR16HD

GENERAL	Model designation	MR16HD												
		1.2	Model designation											
1.8	Load distance, centre of drive axle to fork	x (mm)	308					293						
1.9	Wheelbase	y (mm)	1450											
WEIGHT	2.1	Service weight	kg	4404	4404				4559	4559				
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2696/1708	2696/1708				2640/1918	2640/1918				
	2.4	Axle loading fork advanced, laden front/rear	kg	1345/4659	1345/4659				1068/5090	1068/5090				
	2.5	Axle loading fork retracted, laden front/rear	kg	2404/3600	2404/3600				2234/3924	2234/3924				
	4.19	Overall length	l <sub>1</sub> (mm)	2523	2523	2523	2523	2523	2523	2523	2523	2523	2523	2523
DIMENSIONS	4.2	Length to face of forks	l <sub>2</sub> (mm)	1373	1373	1373	1373	1388	1388	1388	1388	1388	1388	1388
	4.21	Overall width <sup>(5)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1665										
	4.23	Fork carriage ISO 2328, class/type A, B		2A										
	4.24	Fork-carriage width	b <sub>3</sub> (mm)	1100										
	4.25	Distance between fork-arms MIN/MAX <sup>(2)</sup>	b <sub>5</sub> (mm)	260/1078										
	4.26	Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	1295										
	4.28	Reach distance	l <sub>4</sub> (mm)	491	491	491	491	491	491	491	491	491	491	491
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2883	2883	2883	2883	2894	2894	2894	2894	2894	2894	2894
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2945	2945	2945	2945	2958	2958	2958	2958	2958	2958	2958
	4.35	Turning radius	Wa (mm)	1767										
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	No	C	C "Super"	No	No	No	No	
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/720 <sup>(3)</sup>	
	6.5	Battery weight <sup>(1)</sup>	kg	939	950	936	936	1119	1165	1107	1119	1107	1107	

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

(5) With load wheels lateral covers: 1489 mm (Wide), 1689 mm (Extra Wide)

All weights (2.1 to 2.5) are with lowest mast and standard forks

## EXTRA WIDE DIMENSIONS FOR BATTERIES – MR20

GENERAL	Model designation	MR20												
		1.2	Model designation											
1.8	Load distance, centre of drive axle to fork	x (mm)	415					343						
1.9	Wheelbase	y (mm)	1500											
WEIGHT	2.1	Service weight	kg	4041	4041				4195	4195				
	2.3	Axle loading, unladen front/rear <sup>(1)</sup>	kg	2573/1468	2573/1468				2553/1643	2553/1643				
	2.4	Axle loading fork advanced, laden front/rear	kg	890/5152	890/5152				895/5300	895/5300				
	2.5	Axle loading fork retracted, laden front/rear	kg	2293/3748	2293/3748				2134/4062	2134/4062				
	4.19	Overall length	l <sub>1</sub> (mm)	2451	2451	2451	2451	2523	2523	2523	2523	2523	2523	2523
DIMENSIONS	4.2	Length to face of forks	l <sub>2</sub> (mm)	1316	1316	1316	1316	1388	1388	1388	1388	1388	1388	1388
	4.21	Overall width <sup>(5)</sup>	b <sub>1</sub> /b <sub>2</sub> (mm)	1665										
	4.23	Fork carriage ISO 2328, class/type A, B		2A										
	4.24	Fork-carriage width	b <sub>3</sub> (mm)	1100										
	4.25	Distance between fork-arms MIN/MAX <sup>(2)</sup>	b <sub>5</sub> (mm)	260/1078										
	4.26	Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	1295										
	4.28	Reach distance	l <sub>4</sub> (mm)	613	613	613	613	541	541	541	541	541	541	541
	4.34.1	Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	2850	2850	2850	2850	2902	2902	2902	2902	2902	2902	2902
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	2893	2893	2893	2893	2958	2958	2958	2958	2958	2958	2958
	4.35	Turning radius	Wa (mm)	1812										
ELECTRIC	6.3	Battery according to DIN 43531 / 35 / 36 A,B,C, no		C	C "Super"	No	No	C	C "Super"	No	No	No	No	
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	48/560	48/620	48/432 <sup>(3)</sup>	48/540 <sup>(3)</sup>	48/700	48/775	48/540 <sup>(3)</sup>	48/576 <sup>(3)</sup>	48/720 <sup>(3)</sup>	48/720 <sup>(3)</sup>	
	6.5	Battery weight <sup>(1)</sup>	kg	939	950	936	936	1119	1165	1107	1119	1107	1107	

(1) These values may vary of +/- 5%

(2) Available Li-Ion battery 48V / 450Ah (895kg)

(3) Available Li-Ion battery 48V / 450Ah (1067 / 1068kg); Li-Ion battery 48V / 600Ah (1091kg)

(4) Forks retracted

(5) With load wheels lateral covers: 1489 mm (Wide), 1689 mm (Extra Wide)

All weights (2.1 to 2.5) are with lowest mast and standard forks



## FEATURES LIST – MR SERIES

OPERATOR COMPARTMENT	STD	OPT	APPLICATION ENVIRONMENT	STD	OPT
Intermediate step	●		5th hydraulic function		●
Grab handle on overhead guard post	●		Universal support bracket		●
Grab handle under armrest	●		Beverage holder and document tray		●
AccuTouch mini-levers mounted on adjustable length armrest	●		A4 clipboard		●
Joystick mounted on adjustable length armrest		●	Stretch film roll holder		●
Full suspension seat - 60mm suspension travel cloth upholstery	●		Lift limit with override (1 x height setting )		●
Full suspension seat - 80mm suspension travel cloth upholstery		●	Lift limit with override (2 x height settings)		●
Headrest (cloth version only)		●	Lower limit (with override option)		●
Synchronised seat cushion and backrest movement (cloth version only)		●	Flashing beacon		●
Seat belt		●	Work lights x 2 (mast side)		●
Heated seat		●	Work lights x 2 (drive side)		●
Antistatic seat (cloth version only)		●	Polycarbonate (lexan) protection on overhead guard		●
Vinyl seat upholstery		●	Metal grid protection on overhead guard		●
Standard display	●		Full view overhead guard		●
Premium display with touch screen		●	Top / front load wheel protection	●	
Keyless access		●	Side load wheel protection		●
Adjustable steering column	●		High temperature environment		●
Automatic park brake Yalestop	●		Side battery change - battery tray rollers		●
180° steering	●		Side battery change table		●
360° steering		●	Extension cable		●
Driver select steering mode 180 / 360° (push button)		●	Drive-in overhead guard (w 930 x h 1450 / w 930 x h 1700 (mm))		●
<b>TRAVEL PERFORMANCE</b>	<b>STD</b>	<b>OPT</b>	Conductive drive and load wheels		●
Travel speed 11km/h	●		Wet surface drive and load wheels		●
Travel speed 14km/h with electric load wheel braking	●		Side guidance rollers	● <sup>(4)</sup>	●
Speed slow down mast reached forward	●		DC/DC converter (choice of 12V/ 48V, 24V / 48V, 12-24V / 48V options)		●
Speed slow down on cornering	●		Audible alarm (choice of forks leading, forks trailing, both travel directions)		●
Speed slow down over free lift	●		Load backrest (choice of heights 1000 / 1500mm)		●
<b>LIFT PERFORMANCE / DRIVER ASSIST</b>	<b>STD</b>	<b>OPT</b>			
3 stage mast / tilting carriage	●				
Simultaneous lift / reach functionality	●				
Simultaneous hydraulic functionality - 3 functions		●			
Mast cushioning over free lift/main lift sections - fixed sensor mounting	●				
Lift Comfort package <sup>(1)</sup>		●			
High lift speed	● <sup>(2)</sup>	● <sup>(3)</sup>			
Laser line fork positioning aid (above free lift)		●			
Auto side shift centring		●			
Auto fork levelling in the horizontal position		●			
Height preselector (with/without pallet detection device)		●			
Fork, inner mast and load backrest mounted camera / monitor		●			
Weight indicator		●			

- (1) Includes; End of stroke slow down on lift. Soft stop on lowering. Height controlled mast cushioning over Free Lift/Main lift mast section. Height indicator  
 (2) MR20/25, MR16HD and MR20HD  
 (3) MR14/16 and MR16N  
 (4) MR20 only

**All values are nominal values and they are subject to tolerances.**









# About Yale®

Yale Lift Truck Technologies leverages over a century of material handling experience and substantial investment in innovation to bring the most advanced technology-driven lift truck solutions to market. The company offers a full line of award-winning lift trucks, including reach trucks, order pickers, turret trucks, pallet jacks and trucks, pallet stackers, tow tractors and counterbalanced forklifts, as well as powerful operator assist solutions, proven robotics and a wide range of power sources to help customers adapt to today's demanding supply chain. Yale and its independent dealer network support these solutions with comprehensive after-sales service, parts, financing and training.

Yale Lift Truck Technologies is a trading name of Hyster-Yale Asia-Pacific Pty Ltd., a wholly owned subsidiary of Hyster-Yale Materials Handling, Inc.(NYSE:HY) which is headquartered in Cleveland, Ohio and operates globally.

## MATERIALS HANDLING FOR:

Third-party logistics (3PL)

Auto parts distribution

Beverage

Cold & frozen foods

Food distribution

Food processing

Furniture & furnishings

Government

Health & pharma


Home centers

Retail & e-commerce

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