RTL120/140
RTN140
RTM160/200
RTH160(S)/200/250
RTX200
RTF200/250

Disclaimer: The order portal is leading and decides whether options can be added to trucks and if combinations of options are possible. This manual is a quick reference and for information purposes only.

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1 INTRODUCTION

This Option and Specification Manual is a sales tool, which is primarily intended to help, and partly also inspire, in creating application solution proposals, as well as to offer valid configurations and specifications.

For full details on the usage of individual features and functions, always refer to the corresponding Operation and Maintenance Manual (also known as ‘Instruction Handbook’). This handbook is also always available in an English language version under the same heading/folder where this manual is located on your Dealer Support Site (DSS). For questions please use first our ChatBot NEXXIE on the DSS.

NOTE: Considering the extensive scope of information, it is advisable to view this manual in electronic format and use the free text search (CTRL + F) to be able to find all the dependencies (footnotes). For example, with keyword ‘speed’, you can find information in, for instance, Standard configuration, Technical specifications, and several of the option chapters.

2 STANDARD CONFIGURATION

2.1 RTL120, RTL140 standard configuration

		RTL120	RTL140
Nominal capacity	kg	1,200	1,400
Voltage	V	48	48
Maximum battery capacity	Ah	465	620
Truck width	b1 mm	1,120	1,120
Width between wheel arms	b4 mm	900	900
Height of overhead guard	h6 mm	2,205	2,205
Mast width, standard	mm	DTFV = 666	DTFV = 666
Fork length	L1 mm	800 / 1,000 / 1,150	800 / 1,000 / 1,150
Minimum H3	mm	4,800 (DTFV-mast)	4,800 (DTFV-mast)
Approximate weight incl. (C) battery, min/max (Weight based on truck with DTFV mast)	kg	2,500 / 2,900	2,500 / 2,900

As a standard, the truck is supplied with:

Ergologic	Foot step to floor, 390 mm, including instep handle
Electric power steering, 180 degrees	Suspension seat with low backrest
Mini-steering wheel with floating armrest, adjustable height and length	Hands-free direction control, HFDC, in accelerator pedal
Steering wheel angle indicator	Regenerative braking
Integrated sideshift complete, fork stroke 75 mm on each side	Drive motor 5.9 kW, three phase AC
Battery indicator with cut out at 20% remaining battery level	Lift motor 11.0 kW, three phase AC
All wheels Vulkollan®	Max drive speed 12.5 km/h
Load wheels Ø 220 mm	Multifunctional colour display
Automatic electric parking brake	Paper storage and cup holder
Tilting mast	DCC – Dynamic Cornering Control
Reach out battery (R)	Battery connector: Rema SRE 320 Blue 48 V
Grease nipples in mast and reach carriage	Mast Tilt Control, MTC (H3 > 7,200 mm)
Chill store design, down to +1° Celsius	

2.2 RTN140 standard configuration

		RTN140
Nominal capacity	kg	1,400
Voltage	V	48
Maximum battery capacity	Ah	775
Truck width	b1 mm	1,120
Width between wheel arms	b4 mm	900
Height of overhead guard	h6 mm	2,205
Mast width, standard	mm	800
Fork length	L1 mm	800 / 1,000 / 1,150
Minimum H3	mm	4,800
Approximate weight incl. (C) battery, min/max (Weight based on lift height H4 = 6,750 mm)	kg	3,000 / 3,400

As a standard, the truck is supplied with:

Ergologic	Foot step to floor, 390 mm, including instep handle
Electric power steering, 180 degrees	Suspension seat with low backrest
Mini-steering wheel with floating armrest, adjustable height and length	Hands-free direction control, HFDC, in accelerator pedal
Steering wheel angle indicator	Regenerative braking
Integrated sideshift complete, fork stroke 75 mm on each side	Drive motor 5.9 kW, three phase AC
Battery indicator with cut out at 20% remaining battery level	Lift motor 11.0 kW, three phase AC
All wheels Vulkollan®	Max drive speed 12.5 km/h
Load wheels Ø 220 mm	Multifunctional colour display
Automatic electric parking brake	Paper storage and cup holder
Tilting mast	S3 – Stability Support System with Soft Motion
Reach out battery (R)	DCC – Dynamic Cornering Control
Grease nipples in mast and reach carriage	Battery connector: Rema SRE 320 Blue 48 V
Chill store design, down to +1° Celsius	Mast Tilt Control, MTC (H4 > 7200 mm)

2.3 RTM160, RTM200 standard configuration

		RTM160	RTM200
Nominal capacity	kg	1,600	2,000
Voltage	V	48	48
Maximum battery capacity	Ah	775	930
Truck width	b1 mm	1,270	1,270 (1,397)
Width between wheel arms	b4 mm	912	903 (1,030)
Height of overhead guard	h6 mm	2,205	2,205
Mast width, standard	mm	800	820
Fork length	L1 mm	800 / 1,000 / 1,150	800 / 1,000 / 1,150
Minimum H3	mm	4,800	4,800
Approximate weight incl. battery (Weight based on lift height H3 = 6,750 mm)	kg	3,190 - 3,590 (C-battery)	3,740 - 4,140 (E-battery)

As a standard, the truck is supplied with:

Ergologic	Foot step to floor, 390 mm, including instep handle
Electric power steering, 180 degrees	Suspension seat with weight-controlled tilting high backrest
Mini-steering wheel with floating armrest, adjustable height and length	Hands-free direction control, HFDC, in accelerator pedal
Steering wheel angle indicator	Regenerative braking
Integrated sideshift complete, fork stroke 75 mm on each side	Drive motor 7.2 kW, three phase AC
Battery indicator with cut out at 20% remaining battery level	Lift motor 15.0 kW, three phase AC
All wheels Vulkollan®	Max drive speed 12.5 km/h
Load wheels RTM160 Ø 230 mm, RTM200 Ø 285 mm	Multifunctional colour display
Automatic electric parking brake	Paper compartment with cup holder
Tilting mast	S3 – Stability Support System with Soft Motion
Reach out battery (R)	DCC – Dynamic Cornering Control
Grease nipples in mast and reach carriage	Battery connector: Rema SRE 320 Blue 48 V
Chill store design, down to +1° Celsius	Mast Tilt Control, MTC (H4 > 7,200 mm)
Electric adjustable floor height 540-610 mm	Right panel adjustable in length, 60 mm

2.4 RTH160(S), RTH200, RTH250 standard configuration

		RTH160	RTH160S	RTH200	RTH250
Nominal capacity	kg	1,600	1,600	2,000	2,500
Voltage	V	48	48	48	48
Maximum battery capacity	Ah	775	775	930	930
Truck width	b1 mm	1,270 (1,397)	1,270	1,397 (1,270)	1,397
Width between wheel arms	b4 mm	903 (1,030)	1,070	1,030 (903)	1,030
Height of overhead guard	h6 mm	2,205	2,205	2,205	2,205
Mast width, standard	mm	825	825	825	825
Fork length	L1 mm	800 / 1,000 / 1,150	800 / 1,000 / 1,150	800 / 1,000 / 1,150	1,150
Minimum H3	mm	6,350	6,350	6,350	4,800
Approximate weight incl. battery	kg	4,200 – 4,400 (E battery)	4,220 – 4,500 (C battery)	4,400 – 4,600 (E battery)	4,400 – 4,600 (F battery)

As a standard, the truck is supplied with:

- Ergologic
- Electric power steering, 180 degrees
- Mini-steering wheel with floating armrest, adjustable height and length
- Steering wheel angle indicator
- Integrated sideshift complete, fork stroke 75 mm on each side
- Battery indicator with cut out at 20% remaining battery level
- All wheels Vulkollan®
- Load wheels Ø 285 mm (RTH250 incl. load wheel brakes)
- Automatic electric parking brake
- Tilting mast
- Reach out battery (R)
- Grease nipples in mast and reach carriage
- Chill store design, down to +1° Celsius
- Electric adjustable floor height 540-610 mm
- Adjustable lugs, max 15 mm clearance
- Foot step to floor, 390 mm, including instep handle
- Suspension seat with weight-controlled tilting high backrest
- Hands-free direction control, HFDC, in accelerator pedal
- Regenerative braking
- Drive motor 7.2 kW, three phase AC
- Lift motor 15.0 kW, three phase AC
- Max drive speed 12.5 km/h (RTH160S and RTH250 max 12.0 km/h)
- Multifunctional colour display
- Paper compartment with cup holder
- S3 – Stability Support System with Soft Motion
- DCC – Dynamic Cornering Control
- Battery connector: Rema SRE 320 Blue 48 V
- Mast Tilt Control, MTC (H3 > 7,200 mm)
- Right panel adjustable in length, 60 mm

2.5 RTX200 standard configuration

		RTX200
Nominal capacity	kg	2,000
Voltage	V	48
Maximum battery capacity	Ah	930
Truck width	b1 mm	1,397
Width between wheel arms	b4 mm	1,030
Height of overhead guard	h6 mm	2,205
Mast width, standard	mm	825
Fork length	L1 mm	800 / 1,000 / 1,150
Minimum H3	mm	9,600
Approximate weight incl. G-battery	kg	5,200

As a standard, the truck is supplied with:

Ergologic	Foot step to floor, 390 mm, including instep handle
Electric power steering, 180 degrees	Suspension seat with weight-controlled tilting high backrest
Mini-steering wheel with floating armrest, adjustable height and length	Hands-free direction control, HFDC, in accelerator pedal
Steering wheel angle indicator	Regenerative braking
Integrated sideshift complete, fork stroke 75 mm on each side	Drive motor 7.2 kW, three phase AC
Battery indicator with cut out at 20% remaining battery level	Lift motor 15.0 kW, three phase AC
All wheels Vulkollan®	Max drive speed 12.0 km/h
Load wheels Ø 285 mm	Multifunctional colour display
Automatic electric parking brake	Paper compartment with cup holder
Tilting forks	S3 – Stability Support System with Soft Motion
Reach out battery (R)	DCC – Dynamic Cornering Control
Grease nipples in mast and reach carriage	Battery connector: Rema SRE 320 Blue 48 V
Chill store design, down to +1° Celsius	Right panel adjustable in length, 60 mm
Electric adjustable floor height 540-610 mm	Adjustable lugs, max 15 mm clearance

2.6 RTF200, RTF250 standard configuration

		RTF200	RTF250
Nominal capacity	kg	2,000	2,500
Voltage	V	48	48
Maximum battery capacity	Ah	930	930
Truck width	b1 mm	1,744 / 1,498	1,744 / 1,498
Width between wheel arms	b4 mm	903	903
Height of overhead guard	h6 mm	2,215	2,215
Mast width, standard	mm	825	825
Fork length	L1 mm	800 / 1,000 / 1,150	800 / 1,000 / 1,150
Minimum H3	mm	4,350	4,500
Approximate weight incl. battery	kg	4,360 (C-battery) (h3 = 8,500 mm)	4,960 (E-battery) (h3 = 9,700 mm)

As a standard, the truck is supplied with:

Ergologic	Foot step to floor, 400 mm, including instep handle
Electric power steering	Suspension seat with weight-controlled tilting high backrest
360 degrees steering	Hand-operated direction control
Mini-steering wheel with floating armrest, adjustable height and length	Regenerative braking
Steering wheel angle indicator	Drive motor 7.2 kW, three phase AC
Integrated hydraulic fork spread b5=560-1,550 mm	Lift motor 15.0 kW, three phase AC
Battery indicator with cut out at 20% remaining battery level	S3-2 Increased performance
All wheels Vulkollan®	Multifunctional colour display
Load wheels 2 x Ø320*100 mm + 2 x Ø 260*85 mm	Paper compartment with cup holder
Automatic electric parking brake	S3 – Stability Support System with Soft Motion
Tilting mast	DCC – Dynamic Cornering Control
Reach out battery (R)	Battery connector: Rema SRE 320 Blue 48 V
Grease nipples in mast and reach carriage	Mast Tilt Control, MTC (H3 > 7,200 mm)
Chill store design, down to +1° Celsius	Right panel adjustable in length, 60 mm
Exposed axles rust protected	Rear view mirror
Electric adjustable floor height 550-620 mm	

3 TECHNICAL SPECIFICATIONS

3.1 RTL120, RTL140 technical specifications

		VDI 2198	RTL120	RTL140
1	**CHARACTERISTICS**			
1.1	Manufacturer		TCM	TCM
1.2	Manufacturer's model designation		RTL120 (Light) DTFV Art.no 145000	RTL140 (Light) DTFV Art.no 145000
1.3	Power supply (electric, diesel, petrol, gas)		Electric	Electric
1.4	Type of control (manual, pedestrian, stand-on, seated, order picker)		Seated	Seated
1.5	Load capacity	Q [kg]	1,200	1,400
1.6	Load center	c [mm]	400 - 600	400 - 600
1.8	Load distance, axle center to fork face	x [mm]	405 A 335 C	335 C 245 E
1.9	Wheel base	y [mm]	1,378	1,378
2	**WEIGHT**			
2.1	Service weight (incl. battery)	kg	2,580 A 2,780 C (h3 = 6,700 mm)	2,810 C 3,010 E (h3 = 7,250 mm)
2.3	Axle load, without load, front / rear	kg	1,630/950 A (h3 = 6,700 mm)	1,690/1,120 C (h3 = 7,250 mm)
2.4	Axle load, fork outreached with load, front / rear	kg	490/3,290 A (h3 = 6,700 mm)	540/3,670 C (h3 = 7,250 mm)
2.5	Axle load, fork retracted with load, front / rear	kg	1,450/2,330 A (h3 = 6,700 mm)	1,400/2,810 C (h3 = 7,250 mm)
3	**WHEELS AND TYRES**			
3.1	Tyres, front (drive) / rear (load), (rubber, vulkollan, pneumatic)		Vulkollan	Vulkollan
3.2	Tyre size, drive side	mm	355*155	355*155
3.3	Tyre size, load side	mm	220*85	220*85
3.5	Number of wheels, load / drive side (x = driven)		2/1x	2/1x
3.7	Track width, rear (load)	b11 [mm]	995	995
4	**DIMENSIONS**			
4.1	Tilt angle, mast - fork carriage, forward / backward	degr.	1/3 / No	1/3 h3 < 6,701 1/1 / No
4.2	Height of mast, lowered	h1 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.3	Free lift H2=h13+h2	h2 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.4	Lift	h3 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.5	Height of mast, extended	h4 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.7	Height of overhead guard / cabin	h6 [mm]	2,205	2,205

		VDI 2198	RTL120	RTL140
4.8	Height of seat minimum - maximum / stand height	h7 [mm]	1,146	1,146
4.10	Height of wheel arms	h8 [mm]	235	235
4.15	Lowered fork height	h13 [mm]	65	65
4.19	Overall length with fork l = 1150	l1 [mm]	2,343 A 2,413 C	2,413 C 2,503 E
4.20	Length to fork face	l2 [mm]	1,193 A 1,263 C	1,263 C 1,353 E
4.21	Overall width	b1 [mm]	1,120	1,120
4.22	Fork dimensions (standard)	s/e/l [mm]	40 / 100 / 800 - 1,000 - 1,150	40 / 100 / 800 - 1,000 - 1,150
4.23	Fork carriage to ISO 2328, class / form A, B		2 / A	2 / A
4.24	Width of fork carriage	b3 [mm]	830	830
4.25	Fork spread, minimum / maximum	b5 [mm]	316 / 697	316 / 697
4.26	Width between wheel arms	b4 [mm]	900	900
4.28	Reach travel	l4 [mm]	557 A 487 C	487 C 397 E
4.31	Ground clearance, mast	m1 [mm]	70	70
4.32	Ground clearance, center of wheelbase	m2 [mm]	70	70
4.33	Aisle width for pallets 1000 * 1200 (l6 * b12) crossways	Ast [mm]	2,643 A 2,694 C	2,694 C 2,762 E
4.34	Aisle width for pallets 800 * 1200 (b12 * l6) lengthways	Ast [mm]	2,688 A 2,751 C	2,751 C 2,833 E
4.35	Turning radius	Wa [mm]	1,598	1,598
4.37	Length of chassis	l7 [mm]	1,725	1,725
5	**PERFORMANCE**			
5.1	Travel speed, with/without load	km/h	12.3 / 12.5	12.3 / 12.5
5.2	Lifting speed, with/without load	m/s	0.50 / 0.65 @ 1,200 kg	0.49 / 0.65 @ 1,400 kg 0.50 / 0.65 @ 1,000 kg
5.3	Lowering speed, with/without load	m/s	0.58 / 0.55 @ 1,200 kg	0.59 / 0.55 @ 1,400 kg 0.56 / 0.55 @ 1,000 kg
5.4	Reach speed, with/without load	m/s	0.2 / 0.2	0.2 / 0.2
5.8	Maximum gradeability, with/without load	%	13.1 / 19.6	13.1 / 19.6
5.9	Acceleration time (over 10 m) with/without load	s	4.9 / 4.4	4.9 / 4.4
5.10	Service brake		Electric	Electric

		VDI 2198	RTL120	RTL140
6	**ELECTRICAL ENGINEERING**			
6.1	Drive motor, rating S2 = 60 min	kW	5.9 / 3.8	5.9 / 3.8
6.2	Lift motor, rating S3 = 15%	kW	11	11
6.3	Battery according to DIN 43531/35/36, A, B, C, no		43531 B	43531 B
6.4	Battery voltage / rated capacity (5h)	V/Ah	48 / 310 - 465 Tray A C	48 / 420 - 620 Tray C E
6.5	Battery weight (+-5%)	kg	533 - 666 A 708 - 895 C	708 - 895 C 890 - 1,125 E
6.6	Energy consumption according to VDI cycle	kWh/h	5.1	5.1
8	**DRIVE/LIFT**			
8.1	Type of drive control		Electric	Electric
10	**OTHER**			
10.1	Operating pressure for attachments	bar	150	150
10.2	Oil flow for attachments	l/min	25	25
10.7	Level of noise at the ear level of the driver, according to EN 12053	dB (A)	57.4	57.4

With extra equipment for RTL120 and RTL140

		VDI 2198	RTL120	RTL140
	SIDESHIFT			
4.20	Length to fork face	l2 [mm]	-	-
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	-	-
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	-	-
	X BATTERY BED			
4.20	Length to fork face	l2 [mm]	1,203 A 1,273 C	1,273 C 1,363 E
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,650 A 2,701 C	2,701 C 2,770 E
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,697 A 2,760 C	2,760 C 2,843 E
	COLD STORE CABIN			
	Cold store cabin weight	kg	-	+225
2.1	Service weight (incl. battery)	kg	-	3,235 E
4.7	Height of overhead guard/cabin	h6 [mm]	-	2,275
	Cold store cab length increase	mm	-	+120
4.19	Overall length with fork l = 1,150	l1 [mm]	-	2,623 E
4.20	Length to fork face	l2 [mm]	-	1,473 E
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	-	2,892 E
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	-	2,963 E
4.35	Turning radius	Wa [mm]	-	1,728
4.37	Length of chassis	l7 [mm]	-	1,845

Stacking aisle Ast for RTL120 and RTL140

STACKING AISLE AST [MM]	RTL120		RTL140	
(1,200 * 800 MM PALLET LENGTHWISE)	(A) 310 AH	(C) 465 AH	(C) 465 AH	(E) 620 AH
DTFV mast (R) Incl. sideshift	2,593	2,663	2,663	2,753
DTFV mast (X) Incl. sideshift	2,603	2,673	2,673	2,673

Battery on rollers (X) increases L2 by 10 mm, Ast increase by 10 mm, compared to (R).
The L2 and L4 measurements in the specification sheets are based on:

- RTL120: A battery
- RTL140: C battery.

L2 measurement increases with 90 mm with each battery size. (Except 70 mm with A-C battery.)
L4 measurement decreases with the corresponding figures.

3.2 RTN140 technical specifications

		VDI 2198	RTN140
1	**CHARACTERISTICS**		
1.1	Manufacturer		TCM
1.2	Manufacturer's model designation		RTN140 (Deep) DTFV Art.no 145000
1.3	Power supply (electric, diesel, petrol, gas)		Electric
1.4	Type of control (manual, pedestrian, stand-on, seated, order picker)		Seated
1.5	Load capacity	Q [kg]	1,400
1.6	Load center	c [mm]	400 - 600
1.8	Load distance, axle center to fork face	x [mm]	305 C 215 E 125 F
1.9	Wheel base	y [mm]	1,378
2	**WEIGHT**		
2.1	Service weight (incl. battery)	kg	3,010 C 3,210 E 3,410 F (h3 = 8,900 mm)
2.3	Axle load, without load, front / rear	kg	1,780 / 1,230 C (h3 = 8,900 mm)
2.4	Axle load, fork outreached with load, front / rear	kg	570 / 3,840 C (h3 = 8,900 mm)
2.5	Axle load, fork retracted with load, front / rear	kg	1,450 / 2,960 C (h3 = 8,900 mm)
3	**WHEELS AND TYRES**		
3.1	Tyres, front (drive)/ rear (load), (rubber, vulkollan, pneumatic)		Vulkollan
3.2	Tyre size, drive side	mm	355*155
3.3	Tyre size, load side	mm	220*85
3.5	Number of wheels, load / drive side (x = driven)		2/1x
3.7	Track width, rear (load)	b11 [mm]	995

		VDI 2198	RTN140
4	DIMENSIONS		
4.1	Tilt angle, mast - fork carriage, forward / backward	degr.	1/3 h3 < 6,701 1/1 / 1/4 fork
4.2	Height of mast, lowered	h1 [mm]	See the tables in the Mast Chart Manual.
4.3	Free lift H2=h13+h2	h2 [mm]	See the tables in the Mast Chart Manual.
4.4	Lift	h3 [mm]	See the tables in the Mast Chart Manual.
4.5	Height of mast, extended	h4 [mm]	See the tables in the Mast Chart Manual.
4.7	Height of overhead guard/ cabin	h6 [mm]	2,205
4.8	Height of seat minimum - maximum / stand height	h7 [mm]	1,146
4.10	Height of wheel arms	h8 [mm]	235
4.15	Lowered fork height	h13 [mm]	65
4.19	Overall length with fork l = 1150	l1 [mm]	2,443 C 2,533 E 2,623 F
4.20	Length to fork face	l2 [mm]	1,293 C 1,383 E 1,473 F
4.21	Overall width	b1 [mm]	1,120
4.22	Fork dimensions (standard)	s/e/l [mm]	40 / 100 / 800 - 1,000 - 1,150
4.23	Fork carriage to ISO 2328, class / form A, B		2 / A
4.24	Width of fork carriage	b3 [mm]	830
4.25	Fork spread, minimum / maximum	b5 [mm]	316 / 697
4.26	Width between wheel arms	b4 [mm]	900
4.28	Reach travel	l4 [mm]	457 C 367 E 227 F
4.31	Ground clearance, mast	m1 [mm]	70
4.32	Ground clearance, center of wheelbase	m2 [mm]	70
4.33	Aisle width for pallets 1000 * 1200 (l6 * b12) crossways	Ast [mm]	2,716 C 2,786 E 2,859 F
4.34	Aisle width for pallets 800 * 1200 (b12 * l6) lengthways	Ast [mm]	2,778 C 2,861 E 2,945 F
4.35	Turning radius	Wa [mm]	1,598
4.37	Length of chassis	l7 [mm]	1,725

		VDI 2198	RTN140
5	**PERFORMANCE**		
5.1	Travel speed, with/without load	km/h	12.3 / 12.5
5.2	Lifting speed, with/without load	m/s	0.32 / 0.49 @ 1,400kg 0.43 / 0.49 @ 1,000kg
5.3	Lowering speed, with/without load	m/s	0.57 / 0.48 @ 1,400kg 0.57 / 0.48 @ 1,000kg
5.4	Reach speed, with/without load	m/s	0.2 / 0.2
5.8	Maximum gradeability, with/without load	%	13.1 / 19.6
5.9	Acceleration time (over 10 m) with/without load	s	4.9 / 4.4
5.10	Service brake		Electric
6	**ELECTRICAL ENGINEERING**		
6.1	Drive motor, rating S2 = 60 min	kW	5.9 / 3.8
6.2	Lift motor, rating S3 = 15%	kW	11
6.3	Battery according to DIN 43531/35/36, A, B, C, no		43531 B
6.4	Battery voltage / rated capacity (5h)	V/Ah	48 / 420 - 775 Tray C E F
6.5	Battery weight (+-5%)	kg	708 - 895 C 890 - 1,125 E 1,063 - 1,343 F
6.6	Energy consumption according to VDI cycle	kWh/h	5.1
8	**DRIVE/LIFT**		
8.1	Type of drive control		Electric
10	**OTHER**		
10.1	Operating pressure for attachments	bar	150
10.2	Oil flow for attachments	l/min	25
10.7	Level of noise at the ear level of the driver, according to EN 12053	dB (A)	57.4

With extra equipment for RTN140

		VDI 2198	RTN140
	FORKTILT		
4.20	Length to fork face	l2 [mm]	1,322 C 1,412 E 1,502 F
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,739 C 2,810 E 2,883 F
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,805 C 2,889 E 2,973 F
	X BATTERY BED		
4.20	Length to fork face	l2 [mm]	1,303 C 1,393 E 1,483 F
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,724 C 2,795 E 2,868 F
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,788 C 2,871 E 2,955 F
	COLD STORE CABIN		
	Cold store cabin weight	kg	+225
2.1	Service weight (incl. battery)	kg	3,635 F
4.7	Height of overhead guard/cabin	h6 [mm]	2,275
	Cold store cab length increase	mm	+120
4.19	Overall length with fork l = 1,150	l1 [mm]	2,743 F
4.20	Length to fork face	l2 [mm]	1,593 F
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,989 F
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	3,075 F
4.35	Turning radius	Wa [mm]	1,728
4.37	Length of chassis	l7 [mm]	1,845

Stacking aisle Ast for RTN140

STACKING AISLE INCL. SIDESHIFT, UC AST [MM]	RTN140		
(1,200 * 800 MM PALLET LENGTHWISE)	(C) 465 AH	(E) 620 AH	(F) 775 AH
Mast tilt (R)	2,693	2,783	-
Mast tilt (X)	2,703	2,793	2,883
Fork tilt (R)	2,722	2,812	-
Fork tilt (X)	2,732	2,822	2,912

Battery on rollers (X) increases L2 by 10 mm, Ast increase by 10 mm, compared to (R).

The L2 and L4 measurements in the specification sheets are based on:

- RTN140: C battery.

L2 measurement increases with 90 mm with each battery size.

L4 measurement decreases with the corresponding figures.

3.3 RTM160, RTM200 technical specifications

		VDI 2198	RTM160	RTM200
1	**CHARACTERISTICS**			
1.1	Manufacturer		TCM	TCM
1.2	Manufacturer's model designation		RTM160 (Medium) Art.no 145001	RTM200 (Medium) Art.no 145001
1.3	Power supply (electric, diesel, petrol, gas)		Electric	Electric
1.4	Type of control (manual, pedestrian, stand-on, seated, order picker)		Seated	Seated
1.5	Load capacity	Q [kg]	1,600	2,000
1.6	Load center	c [mm]	400 - 600	400 - 600
1.8	Load distance, axle center to fork face	x [mm]	439 C 367 E 295 F	441 E 369 F 297 G
1.9	Wheel base	y [mm]	1,448	1,530
2	**WEIGHT**			
2.1	Service weight (incl. battery)	kg	3,190 C 3,390 E 3,590 F (h3 = 8,900 mm)	3,740 E 3,940 F 4,140 G (h3 = 8,900 mm)
2.3	Axle load, without load, front / rear	kg	2,000 / 1,190 C (h3 = 8,900mm)	2,290 / 1,450 E (h3 = 8,900mm)
2.4	Axle load, fork outreached with load, front / rear	kg	650 / 4,140 C (h3 = 8,900mm)	550 / 5,190 E (h3 = 8,900mm)
2.5	Axle load, fork retracted with load, front / rear	kg	1,750 / 3,040 C (h3 = 8,900mm)	2,040 / 3,700 E (h3 = 8,900mm)
3	**WHEELS AND TYRES**			
3.1	Tyres, front (drive)/ rear (load), (rubber, vulkollan, pneumatic)		Vulkollan	Vulkollan
3.2	Tyre size, drive side	mm	355*155	355*155
3.3	Tyre size, load side	mm	230*105 285*105	230*105 285*105
3.5	Number of wheels, load / drive side (x = driven)		2/1x	2/1x
3.7	Track width, rear (load)	b11 [mm]	1,128	1,128

		VDI 2198	RTM160	RTM200
4	DIMENSIONS			
4.1	Tilt angle, mast - fork carriage, forward / backward	degr.	1/3 h3 < 6,701 1/1 / 1/4 fork	1/3 h3 < 6,701 1/1 / 1/4 fork
4.2	Height of mast, lowered	h1 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.3	Free lift H2=h13+h2	h2 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.4	Lift	h3 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.5	Height of mast, extended	h4 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.7	Height of overhead guard / cabin	h6 [mm]	2,205	2,205
4.8	Height of seat minimum - maximum / stand height	h7 [mm]	1,153	1,153
4.10	Height of wheel arms	h8 [mm]	235	235
4.15	Lowered fork height	h13 [mm]	65	65
4.19	Overall length with fork l = 1150	l1 [mm]	2,379 C 2,451 E 2,523 F	2,460 E 2,532 F 2,604 G
4.20	Length to fork face	l2 [mm]	1,229 C 1,301 E 1,373 F	1,310 E 1,382 F 1,454 G
4.21	Overall width	b1 [mm]	1,270	1,270 / 1,397
4.22	Fork dimensions (standard)	s/e/l [mm]	40 / 100 / 800 - 1,000 - 1,150	40 / 100 / 800 - 1,000 - 1,150
4.23	Fork carriage to ISO 2328, class / form A, B		2 / A	2 / A
4.24	Width of fork carriage	b3 [mm]	830	830
4.25	Fork spread, minimum / maximum	b5 [mm]	316 / 697	316 / 697
4.26	Width between wheel arms	b4 [mm]	912	903 / 1,030
4.28	Reach travel	l4 [mm]	596 C 524 E 452 F	625 E 553 F 481 G
4.31	Ground clearance, mast	m1 [mm]	70	71
4.32	Ground clearance, center of wheelbase	m2 [mm]	70	70
4.33	Aisle width for pallets 1000 * 1200 (l6 * b12) crossways	Ast [mm]	2,689 C 2,740 E 2,794 F	2,770 E 2,821 F 2,875 G
4.34	Aisle width for pallets 800 * 1200 (b12 * l6) lengthways	Ast [mm]	2,728 C 2,792 E 2,857 F	2,808 E 2,873 F 2,938 G
4.35	Turning radius	Wa [mm]	1,668	1,750
4.37	Length of chassis	l7 [mm]	1,800	1,910

		VDI 2198	RTM160	RTM200
5	**PERFORMANCE**			
5.1	Travel speed, with/without load	km/h	14.3 / 14.5	14.3 / 14.5
5.2	Lifting speed, with/without load	m/s	0.49 / 0.80 @ 1,600kg 0.55 / 0.80 @ 1,000kg	0.37 / 0.63 @ 2,000kg 0.46 / 0.63 @ 1,000kg
5.3	Lowering speed, with/without load	m/s	0.49 / 0.48 @ 1,600kg 0.55 / 0.48 @ 1,000kg	0.55 / 0.43 @ 2,000kg 0.58 / 0.43 @ 1,000kg
5.4	Reach speed, with/without load	m/s	0.2 / 0.2	0.2 / 0.2
5.8	Maximum gradeability, with/without load	%	14.9 / 19.6	12.1 / 17.9
5.9	Acceleration time (over 10 m) with/without load	s	4.8 / 4.4	4.8 / 4.4
5.10	Service brake		Electric	Electric
6	**ELECTRICAL ENGINEERING**			
6.1	Drive motor, rating S2 = 60 min	kW	7.2 / 3.95	7.2 / 3.95
6.2	Lift motor, rating S3 = 15%	kW	15	15
6.3	Battery according to DIN 43531/35/36, A, B, C, no		43531 C	43531 C
6.4	Battery voltage / rated capacity (5h)	V/Ah	48 / 465 / 620 / 775 Tray C E F	48 / 620 / 775 / 930 Tray E F G
6.5	Battery weight (+-5%)	kg	712 - 900 C 892 - 1,127 E 1,063 - 1,343 F	892 - 1,127 E 1,063 - 1,343 F 1,240 - 1,567 G
6.6	Energy consumption according to VDI cycle	kWh/h	5.3	5.3
8	**DRIVE/LIFT**			
8.1	Type of drive control		Electric	Electric
10	**OTHER**			
10.1	Operating pressure for attachments	bar	150	150
10.2	Oil flow for attachments	l/min	25	25
10.7	Level of noise at the ear level of the driver, according to EN 12053	dB (A)	60.8	60.8

With extra equipment for RTM160 and RTM200

		VDI 2198	RTM160	RTM200
	FORKTILT			
4.20	Length to fork face	l2 [mm]	1,258 C 1,330 E 1,402 F	1,326 E 1,398 F 1,470 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,710 C 2,762 E 2,817 F	2,782 E 2,833 F 2,887 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,754 C 2,819 E 2,885 F	2,823 E 2,887 F 2,953 G
	M BATTERY BED			
4.20	Length to fork face	l2 [mm]	1,425 F	1,434 F
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,834 F	2,860 F
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,906 F	2,920 F
	X BATTERY BED			
4.20	Length to fork face	l2 [mm]	1,239 C 1,311 E 1,383 F	1,320 E 1,392 F 1,464 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,697 C 2,748 E 2,802 F	2,777 E 2,828 F 2,882 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,737 C 2,802 E 2,867 F	2,817 E 2,882 F 2,947 G
	COLD STORE CABIN			
	Cold store cabin weight	kg	+225	+225
2.1	Service weight (incl. battery)	kg	3,815 F (h3 = 8,900 mm)	4,165 F 4,365 G (h3 = 8,900 mm)
4.7	Height of overhead guard/cabin	h6 [mm]	2,275	2,275
	Cold store cab length increase	mm	+120	+120
4.19	Overall length with fork l = 1,150	l1 [mm]	2,643 F	2,652 F 2,724 G
4.20	Length to fork face	l2 [mm]	1,493 F	1,502 F 1,574 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,924 F	2,951 F 3,005 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,987 F	3,003 F 3,068 G
4.35	Turning radius	Wa [mm]	1,798	1,880
4.37	Length of chassis	l7 [mm]	1,920	2,030

Stacking aisle Ast for RTM160 and RTM200

STACKING AISLE UC AST [MM]	RTM160			RTM200		
(1,200 * 800 MM PALLET LENGTHWISE)	(C) 465 AH	(E) 620 AH	(F) 775 AH	(E) 620 AH	(F) 775 AH	(G) 930 AH
Mast tilt (R)	2,629	2,701	2,773	2,709	2,781	2,853
Mast tilt (X)	2,639	2,711	2,783	2,719	2,791	2,863
Mast tilt (M)	-	-	2,825	-	2,833	-
Fork tilt (R)	2,658	2,730	2,802	2,725	2,797	2,869
Fork tilt (X)	2,668	2,740	2,812	2,735	2,807	2,879
Fork tilt (M)	-	-	2,854	-	2,849	-

Battery on rollers (X) increases L2 by 10 mm, Ast increase by 10 mm, compared to (R).

Motor Powered battery bed (M) increases L2 by 52 mm. Ast increase by 52 mm, compared to (R).

Fork tilt increase L2 on: RTM160 by 29 mm, RTM200 by 16 mm. Ast increase correspondingly, compared to mast tilt.

The L2 and L4 measurements in the specification sheets are based on:

- RTM160: C battery
- RTM200: E battery.

L2 measurement increases with 72 mm with each battery size.

L4 measurement decreases with the corresponding figures.

3.4 RTH160(S), RTH200, RTH250 technical specifications

		VDI 2198	RTH160	RTH160S	RTH200	RTH250
1	**CHARACTERISTICS**					
1.1	Manufacturer		TCM	TCM	TCM	TCM
1.2	Manufacturer's model designation		RTH160 (Heavy) Art.no 145002	RTH160S (Heavy) Art.no 145002	RTH200 (Heavy) Art.no 145002	RTH250 (Heavy) Art.no 145002
1.3	Power supply (electric, diesel, petrol, gas)		Electric	Electric	Electric	Electric
1.4	Type of control (manual, pedestrian, stand-on, seated, order picker)		Seated	Seated	Seated	Seated
1.5	Load capacity	Q [kg]	1,600	1,600	2,000	2,500
1.6	Load center	c [mm]	400 - 600	400 - 600	400 - 600	400 - 600
1.8	Load distance, axle center to fork face	x [mm]	306 E 234 F	381 C 309 E 237 F	416 E 344 F 272 G	439 F 367 G
1.9	Wheel base	y [mm]	1,420	1,420	1,530	1,630
2	**WEIGHT**					
2.1	Service weight (incl. battery)	kg	4,220 E 4,420 F (h3 = 10,750 mm)	4,220 C 4,400 E 4,571 F (h3 = 9600 mm)	4,150 E 4,350 F 4,550 G (h3 = 11,450 mm)	4,400 F 4,600 G (h3 = 8,900 mm)
2.3	Axle load, without load, front / rear	kg	2,410 / 1,810 E (h3 = 10,750 mm)	2,556 / 1,930 C (h3 = 9600 mm)	2,400 / 1,750 E (h3 = 11,450 mm)	2,400 / 2,000 F (h3 = 8,900 mm)
2.4	Axle load, fork outreached with load, front / rear	kg	1,080 / 4,730 E (h3 = 10,750 mm)	1,106 / 4,985 C (h3 = 9600 mm)	650 / 5,500 E (h3 = 11,450 mm)	800 / 6,100 F (h3 = 8,900 mm)
2.5	Axle load, fork retracted with load, front / rear	kg	1,940 / 3,870 E (h3 = 10,750 mm)	2,041 / 3,965 C (h3 = 9600 mm)	2,050 / 4,100 E (h3 = 11,450 mm)	2,100 / 4,800 F (h3 = 8,900 mm)
3	**WHEELS AND TYRES**					
3.1	Tyres, front (drive)/ rear (load), (rubber, vulkollan, pneumatic)		Vulkollan	Vulkollan	Vulkollan	Vulkollan
3.2	Tyre size, drive side	mm	355*155	355*155	355*155	355*155
3.3	Tyre size, load side	mm	230*105 285*105	285*75	230*105 285*105	285*105
3.5	Number of wheels, load / drive side (x = driven)		2/1x	2/1x	2/1x	2/1x
3.7	Track width, rear (load)	b11 [mm]	1,128 / 1,255	1,157	1,128 / 1,255	1,255

		VDI 2198	RTH160	RTH160S	RTH200	RTH250
4	DIMENSIONS					
4.1	Tilt angle, mast - fork carriage, forward / backward	degr.	1/3 h3 < 6,651 1/1 h3 < 9,851 / 1/4 fork	1/3 h3 < 6,651 1/1 h3 < 9,851 / 1/4 fork	1/3 h3 < 6,651 1/1 h3 < 9,851 / 1/4 fork	1/3 h3 < 6,651 1/1 / 1/4 fork
4.2	Height of mast, lowered	h1 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.3	Free lift H2=h13+h2	h2 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.4	Lift	h3 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.5	Height of mast, extended	h4 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.7	Height of overhead guard/ cabin	h6 [mm]	2,205	2,205	2,205	2,205
4.8	Height of seat minimum - maximum / stand height	h7 [mm]	1,153	1,153	1,153	1,153
4.10	Height of wheel arms	h8 [mm]	235	305	235	235
4.15	Lowered fork height	h13 [mm]	65	65	65	65
4.19	Overall length with fork l = 1150	l1 [mm]	2,485 E 2,557 F	2,413 C 2,485 E 2,557 F	2,485 E 2,557 F 2,629 G	2,562 F 2,634 G
4.20	Length to fork face	l2 [mm]	1,335 E 1,407 F	1,263 C 1,335 E 1,407 F	1,335 E 1,407 F 1,479 G	1,412 F 1,484 G
4.21	Overall width	b1 [mm]	1,270 / 1,397	1,270	1,270 / 1,397	1,397
4.22	Fork dimensions (standard)	s/e/l [mm]	40 / 100 / 800 - 1,000 - 1,150	40 / 100 / 1,150	40 / 100 / 800-1,000-1,150	45 / 100 / 1,150
4.23	Fork carriage to ISO 2328, class / form A, B		2 / A	2 / A	2 / A	2 / A
4.24	Width of fork carriage	b3 [mm]	830	830	830	830
4.25	Fork spread, minimum / maximum	b5 [mm]	316 / 697	316 / 697	316 / 697	316 / 697
4.26	Width between wheel arms	b4 [mm]	903 / 1,030	1,070	903 / 1,030	1,030
4.28	Reach travel	l4 [mm]	490 E 418 F	565 C 493 E 421 F	600 E 528 F 456 G	628 F 556 G
4.31	Ground clearance, mast	m1 [mm]	71	71	71	71
4.32	Ground clearance, center of wheelbase	m2 [mm]	70	70	70	70
4.33	Aisle width for pallets 1000 * 1200 (l6 * b12) crossways	Ast [mm]	2,761 E 2,816 F	2708 C 2761 E 2816 F	2,788 E 2,839 F 2,894 G	2,871 F 2,921 G
4.34	Aisle width for pallets 800 * 1200 (b12 * l6) lengthways	Ast [mm]	2,823 E 2,889 F	2758 C 2823 E 2889 F	2,831 E 2,895 F 2,961 G	2,910 F 2,974 G
4.35	Turning radius	Wa [mm]	1,643	1,643	1,750	1,850

		VDI 2198	RTH160	RTH160S	RTH200	RTH250
4.37	Length of chassis	l7 [mm]	1,800	1,803	1,910	2,010
5	**PERFORMANCE**					
5.1	Travel speed, with/without load	km/h	14.3 / 14.5	12.0 / 12.0	14.3 / 14.5	12.0 / 12.0
5.2	Lifting speed, with/without load	m/s	0.48 / 0.68 @ 1,600 kg 0.54 / 0.68 @ 1,000 kg	0.48 / 0.68 @ 1,600 kg	0.37 / 0.63 @ 2,000 kg 0.46 / 0.63 @ 1,000 kg	0.33 / 0.52 @ 2,500 kg 0.54 / 0.52 @ 1,000 kg
5.3	Lowering speed, with/without load	m/s	0.5 / 0.48 @ 1,600 kg	0.5 / 0.48 @ 1,600 kg	0.55 / 0.43 @ 2,000 kg 0.58 / 0.43 @ 1,000 kg	0.55 / 0.43 @ 2,500 kg 0.58 / 0.43 @ 1,000 kg
5.4	Reach speed, with/without load	m/s	0.2 / 0.2	0.2 / 0.2	0.2 / 0.2	0.2 / 0.2
5.8	Maximum gradeability, with/without load	%	11 / 15.2	11 / 15.2	11 / 16.5	9.2 /14.7
5.9	Acceleration time (over 10 m) with/without load	s	5.1 / 4.6	5.1 / 4.6	4.8 / 4.4	4.8 / 4.4
5.10	Service brake		Electric	Electric	Electric	Electric
6	**ELECTRICAL ENGINEERING**					
6.1	Drive motor, rating S2 = 60 min	kW	7.2	7.2	7.2 / 3.95	7.2 / 3.95
6.2	Lift motor, rating S3 = 15%	kW	15	15	15	15
6.3	Battery according to DIN 43531/35/36, A, B, C, no		43531 C	43531 C	43531 C	43531 C
6.4	Battery voltage / rated capacity (5h)	V/Ah	48 / 620 - 775 Tray E F	48 - 465 / 620 / 775 Tray C E F	48 / 620 / 775 / 930 Tray E F G	48 / 775 - 930 Tray F G
6.5	Battery weight (+-5%)	kg	892 - 1,127 E 1,063 - 1,343 F	712 - 1,063 C 892 - 1,127 E 1,063 - 1,343 F	892 - 1,127 E 1,063 - 1,343 F 1,240 - 1,567 G	1,063 - 1,343 F 1,240 - 1,567 G
6.6	Energy consumption according to VDI cycle	kWh/h	5.3	5.3	5.3	5.3
8	**DRIVE/LIFT**					
8.1	Type of drive control		Electric	Electric	Electric	Electric
10	**OTHER**					
10.1	Operating pressure for attachments	bar	150	150	150	150
10.2	Oil flow for attachments	l/min	25	25	25	25
10.7	Level of noise at the ear level of the driver, according to EN 12053	dB (A)	60.8	60.8	60.8	60.8

With extra equipment for RTH160, RTH200 and RTH250

		VDI 2198	RTH160	RTH200	RTH250
	FORKTILT				
4.20	Length to fork face	l2 [mm]	1,351 E 1,423 F	1,351 E 1,423 F 1,495 G	1,428 F 1,500 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,773 E 2,829 F	2,799 E 2,851 F 2,906 G	2,883 F 2,934 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,837 E 2,904 F	2,845 E 2,910 F 2,976 G	2,924 F 2,989 G
	M BATTERY BED				
4.20	Length to fork face	l2 [mm]	1,459 F	1,459 F	1,464 F
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,858 F	2,879 F	2,908 F
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,937 F	2,943 F	2,957 F
	X BATTERY BED				
4.20	Length to fork face	l2 [mm]	1,345 E 1,417 F	1,345 E 1,417 F 1,489 G	1,422 F 1,494 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,768 E 2,824 F	2,795 E 2,847 F 2,902 G	2,879 F 2,930 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,832 E 2,898 F	2,840 E 2,904 F 2,970 G	2,919 F 2,984 G
	COLD STORE CABIN				
	Cold store cabin weight	kg	+225	+225	+225
2.1	Service weight (incl. battery)	kg	4,655 F (h3 = 10,750 mm)	4,575 F 4,775 G (h3 = 11,450 mm)	4,625 F 4,825 G (h3 = 8,900 mm)
4.7	Height of overhead guard/cabin	h6 [mm]	2,275	2,275	2,275
	Cold store cab length increase	mm	+130	+120	+120
4.19	Overall length with fork l = 1,150	l1 [mm]	2,687 F	2,677 F 2,749 G	2,682 F 2,754 G
4.20	Length to fork face	l2 [mm]	1,537 F	1,527 F 1,599 G	1,532 F 1,604 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,946 F	2,969 F 3,024 G	3,001 F 3,052 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	3,019 F	3,025 F 3,091 G	3,040 F 3,104 G
4.35	Turning radius	Wa [mm]	1,773	1,880	1,980
4.37	Length of chassis	l7 [mm]	1,930	2,030	2,130

Stacking aisle Ast for RTH160, RTH160S, RTH200 and RTH250

STACKING AISLE AST [MM]	RTH160		RTH160S			RTH200			RTH250	
(1,200 * 800 MM PALLET LENGTHWISE)	(E) 620 AH	(F) 775 AH	(C) 465 AH	(E) 620 AH	(F) 775 AH	(E) 620 AH	(F) 775 AH	(G) 930 AH	(F) 775 AH	(G) 930 AH
Mast tilt (R)	2,734	2,806	2,758	2,821	2,889	2,734	2,806	2,878	2,811	2,883
Mast tilt (X)	2,744	2,816	2,768	2,831	2,899	2,744	2,816	2,888	2,821	2,893
Mast tilt (M)	-	2,858	2,810	2,873	2,941	-	2,858	-	2,863	-
Fork tilt (R)	2,750	2,822	2,758	2,829	2,897	2,750	2,822	2,894	2,827	2,899
Fork tilt (X)	2,760	2,832	2,768	2,839	2,907	2,760	2,832	2,904	2,837	2,909
Fork tilt (M)	-	2,874	2,810	2,881	2,949	-	2,874	-	2,879	-

Battery on rollers (X) increases L2 by 10 mm, Ast increase by 10 mm, compared to (R).

Motor Powered battery bed (M) increases L2 by 52 mm. Ast increase by 52 mm, compared to (R).

Fork tilt increases L2 by 16 mm. Ast increase by 16 mm, compared to mast tilt.

The L2 and L4 measurements in the specification sheets are based on:

- RTH160: E battery
- RTH200: E battery
- RTH250: F battery.

L2 measurement increases with 72 mm with each battery size.

L4 measurement decreases with the corresponding figures.

3.5 RTX200 technical specifications

		VDI 2198	RTX200
1	**CHARACTERISTICS**		
1.1	Manufacturer		TCM
1.2	Manufacturer's model designation		RTX200 (High) Art.no 145003
1.3	Power supply (electric, diesel, petrol, gas)		Electric
1.4	Type of control (manual, pedestrian, stand-on, seated, order picker)		Seated
1.5	Load capacity	Q [kg]	2,000
1.6	Load center	c [mm]	400 - 600
1.8	Load distance, axle center to fork face	x [mm]	256 G
1.9	Wheel base	y [mm]	1,530
2	**WEIGHT**		
2.1	Service weight (incl. battery)	kg	5,200 G (h3 = 12,050 mm)
2.3	Axle load, without load, front / rear	kg	2,790 / 2,410 G (h3 = 12,050 mm)
2.4	Axle load, fork outreached with load, front / rear	kg	1,060 / 6,140 G (h3 = 12,050 mm)
2.5	Axle load, fork retracted with load, front / rear	kg	2,280 / 4,920 G (h3 = 12,050 mm)
3	**WHEELS AND TYRES**		
3.1	Tyres, front (drive)/ rear (load), (rubber, vulkollan, pneumatic)		Vulkollan
3.2	Tyre size, drive side	mm	355*155
3.3	Tyre size, load side	mm	285*105
3.5	Number of wheels, load / drive side (x = driven)		2/1x
3.7	Track width, rear (load)	b11 [mm]	1,255
4	**DIMENSIONS**		
4.1	Tilt angle, mast - fork carriage, forward / backward	degr.	No - 1/4 fork
4.2	Height of mast, lowered	h1 [mm]	See the tables in the Mast Chart Manual.
4.3	Free lift H2=h13+h2	h2 [mm]	See the tables in the Mast Chart Manual.
4.4	Lift	h3 [mm]	See the tables in the Mast Chart Manual.
4.5	Height of mast, extended	h4 [mm]	See the tables in the Mast Chart Manual.
4.7	Height of overhead guard/ cabin	h6 [mm]	2,205
4.8	Height of seat minimum - maximum / stand height	h7 [mm]	1,153

		VDI 2198	RTX200
4.10	Height of wheel arms	h8 [mm]	235
4.15	Lowered fork height	h13 [mm]	65
4.19	Overall length with fork l = 1150	l1 [mm]	2,645 G
4.20	Length to fork face	l2 [mm]	1,495 G
4.21	Overall width	b1 [mm]	1,397
4.22	Fork dimensions (standard)	s/e/l [mm]	40 / 100 / 800 – 1,000 – 1,150
4.23	Fork carriage to ISO 2328, class / form A, B		2 / A
4.24	Width of fork carriage	b3 [mm]	830
4.25	Fork spread, minimum / maximum	b5 [mm]	316 / 697
4.26	Width between wheel arms	b4 [mm]	1,030
4.28	Reach travel	l4 [mm]	430 G
4.31	Ground clearance, mast	m1 [mm]	71
4.32	Ground clearance, center of wheelbase	m2 [mm]	70
4.33	Aisle width for pallets 1000 * 1200 (l6 * b12) crossways	Ast [mm]	2,906 G
4.34	Aisle width for pallets 800 * 1200 (b12 * l6) lengthways	Ast [mm]	2,976 G
4.35	Turning radius	Wa [mm]	1,750
4.37	Length of chassis	l7 [mm]	1,910
5	**PERFORMANCE**		
5.1	Travel speed, with/without load	km/h	12.0 / 12.0
5.2	Lifting speed, with/without load	m/s	0.36 / 0.52 @ 2,000 kg 0.49 / 0.52 @ 1,000 kg
5.3	Lowering speed, with/without load	m/s	0.54 / 0.45 @ 2,000 kg 0.58 / 0.45 @ 1,000 kg
5.4	Reach speed, with/without load	m/s	0.2 / 0.2
5.8	Maximum gradeability, with/without load	%	10.7 / 14.7
5.9	Acceleration time (over 10 m) with/without load	s	4.8 / 4.4
5.10	Service brake		Electric
6	**ELECTRICAL ENGINEERING**		
6.1	Drive motor, rating S2 = 60 min	kW	7.2 / 3.95
6.2	Lift motor, rating S3 = 15%	kW	15
6.3	Battery according to DIN 43531/35/36, A, B, C, no		43531 C
6.4	Battery voltage / rated capacity (5h)	V/Ah	48 / 930 Tray G (48 / 700 - 775 Tray F)
6.5	Battery weight (+-5%)	kg	1,240 - 1,567 G
6.6	Energy consumption according to VDI cycle	kWh/h	5.3
8	**DRIVE/LIFT**		
8.1	Type of drive control		Electric
10	**OTHER**		
10.1	Operating pressure for attachments	bar	150
10.2	Oil flow for attachments	l/min	25
10.7	Level of noise at the ear level of the driver, according to EN 12053	dB (A)	60.8

With extra equipment for RTX200

		VDI 2198	RTX200
	M BATTERY BED		
4.20	Length to fork face	l2 [mm]	1,475 E
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,891 F
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,957 F
	X BATTERY BED		
4.20	Length to fork face	l2 [mm]	1,505 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	2,914 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	2,985 G
	COLD STORE CABIN		
	Cold store cabin weight	kg	+225
2.1	Service weight (incl. battery)	kg	5,425 G (h3 = 12,050 mm)
4.7	Height of overhead guard/cabin	h6 [mm]	2,275
	Cold store cab length increase	mm	+120
4.19	Overall length with fork l = 1,150	l1 [mm]	2,765 G
4.20	Length to fork face	l2 [mm]	1,615 G
4.33	Aisle width for pallets 1,000 * 1,200 (l6 * b12) crossways	Ast [mm]	3,036 G
4.34	Aisle width for pallets 800 * 1,200 (b12 * l6) lengthways	Ast [mm]	3,106 G
4.35	Turning radius	Wa [mm]	1,880
4.37	Length of chassis	l7 [mm]	2,030

Stacking aisle Ast for RTX200

STACKING AISLE INCL. SIDESHIFT, UC AST [MM]	RTX200	
(1,200 * 800 MM PALLET LENGTHWISE)	(F) 775 AH	(G) 930 AH
Fork tilt (R)	-	2,966
Fork tilt (X)	-	2,976
Fork tilt (M)	2,874	-

Battery on rollers (X) increases L2 by 10 mm, Ast increase by 10 mm, compared to (R).

The L2 and L4 measurements in the specification sheets are based on:

- RTX200: G battery.

3.6 RTF200, RTF250 technical specifications

		VDI 2198	RTF200	RTF250
1	**CHARACTERISTICS**			
1.1	Manufacturer		TCM	TCM
1.2	Manufacturer's model designation		RTF200	RTF250
1.3	Power supply (electric, diesel, petrol, gas)		Electric	Electric
1.4	Type of control (manual, pedestrian, stand-on, seated, order picker)		Seated	Seated
1.5	Load capacity	Q [kg]	2,000	2,500
1.6	Load center	c [mm]	600	600
1.8	Load distance, axle center to fork face	x [mm]	449*	527*
1.9	Wheel base	y [mm]	1,505	1,665
2	**WEIGHT**			
2.1	Service weight (incl. battery)	kg	4,360	4,960
2.3	Axle load, without load, front / rear	kg	2,550 / 1,810	2,880 / 2,080
2.4	Axle load, fork outreached with load, front / rear	kg	800 / 5,560	660 / 6,800
2.5	Axle load, fork retracted with load, front / rear	kg	2,360 / 4,000	2,830 / 4,630
3	**WHEELS AND TYRES**			
3.1	Tyres, front (drive)/ rear (load), (rubber, vulkollan, pneumatic)		Vulkollan	Vulkollan
3.2	Tyre size, drive side	mm	355*155	355*155
3.3	Tyre size, load side	mm	260*85, 320*100	260*85, 320*100
3.5	Number of wheels, load / drive side (x = driven)		4/1x	4/1x
3.6	Track width, front (drive)	b10 [mm]	0	0
3.7	Track width, rear (load)	b11 [mm]	1,444	1,444
4	**DIMENSIONS**			
4.1	Tilt angle, mast - fork carriage, forward / backward	degr.	1.5 / 3.5, 1/3, 1/1	1.5 / 3.5, 1/3, 1/1
4.2	Height of mast, lowered	h1 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.3	Free lift H2=h13+h2	h2 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.4	Lift	h3 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.5	Height of mast, extended	h4 [mm]	See the tables in the Mast Chart Manual.	See the tables in the Mast Chart Manual.
4.7	Height of overhead guard/ cabin	h6 [mm]	2,215	2,215
4.8	Height of seat minimum - maximum / stand height	h7 [mm]	1,087	1,087

		VDI 2198	RTF200	RTF250
4.10	Height of wheel arms	h8 [mm]	430	430
4.15	Lowered fork height	h13 [mm]	65	65
4.19	Overall length with fork l = 1150	l1 [mm]	2,473*	2,555*
4.20	Length to fork face	l2 [mm]	1,323*	1,405*
4.21	Overall width	b1 [mm]	1,744 / 1,498	1,744 / 1,498
4.22	Fork dimensions (standard)	s/e/l [mm]	45 / 125 / 800, 1,000, 1,150	45 / 125 / 800, 1,000, 1,150
4.24	Width of fork carriage	b3 [mm]	1,500 / 2,170	1,500 / 2,170
4.25	Fork spread, minimum / maximum	b5 [mm]	560 / 1550, 560 / 2220	560 / 1550, 560 / 2220
4.26	Width between wheel arms	b4 [mm]	903	903
4.28	Reach travel	l4 [mm]	704*	782*
4.31	Ground clearance, mast	m1 [mm]	81	81
4.32	Ground clearance, center of wheelbase	m2 [mm]	80	80
4.33	Aisle width for pallets 1000 * 1200 (l6 * b12) crossways	Ast [mm]	2,787*	2,896*
4.34	Aisle width for pallets 800 * 1200 (b12 * l6) lengthways	Ast [mm]	2,823*	2,915*
4.35	Turning radius	Wa [mm]	1,772	1,932
4.37	Length of chassis	l7 [mm]	1,942	2,102
5	**PERFORMANCE**			
5.1	Travel speed, with/without load	km/h	13.0 / 13.0	13.0 / 13.0
5.2	Lifting speed, with/without load	m/s	0.33 / 0.55	0.32 / 0.53
5.3	Lowering speed, with/without load	m/s	0.54 / 0.47	0.53 / 0.53
5.4	Reach speed, with/without load	m/s	0.2 / 0.2	0.2 / 0.2
5.8	Maximum gradeability, with/without load	%	10 / 15	9 / 14
5.9	Acceleration time (over 10 m) with/without load	s	5.7 / 5.0	6.2 / 5.2
5.10	Service brake		Electric (drive motor)	Electric (drive motor)
5.10.1	Parking brake		Mechanical (drive motor)	Mechanical (drive motor)
6	**ELECTRICAL ENGINEERING**			
6.1	Drive motor, rating S2 = 60 min	kW	7.2	7.2
6.2	Lift motor, rating S3 = 15%	kW	15	15
6.3	Battery according to DIN 43531/35/36, A, B, C, no		43531 C	43531 C
6.4	Battery voltage / rated capacity (5h)	V/Ah	48 / 465 - 930	48 / 620 - 930
6.5	Battery weight (+-5%)	kg	712 - 1567*	892 - 1,567*
8	**DRIVE/LIFT**			
8.1	Speed regulation		Electric	Electric
10	**OTHER**			
10.1	Operating pressure for attachments	bar	150	150
10.2	Oil flow for attachments	l/min	25	25
10.7	Level of noise at the ear level of the driver, according to EN 12053	dB (A)	59.7	59.7

* Varies according to battery size.

Stacking aisle Ast for RTF200 and RTF250

STACKING AISLE AST [MM]	RTF200				RTF250		
(1,200 * 800 MM PALLET LENGTHWISE)	(C) 465 AH	(E) 620 AH	(F) 775 AH	(G) 930 AH	(E) 620 AH	(F) 775 AH	(G) 930 AH
Mast tilt (R) incl. hydraulic fork spread	2,823	2,851	2,916	2,982	2,915	2,956	3,019
Mast tilt (X) incl. hydraulic fork spread	2,832	2,860	2,925	2,991	2,924	2,965	3,028
Mast tilt (M) incl. hydraulic fork spread	-	-	-	-	-	3,001	-

Battery on rollers (X) increases L2 by 10 mm, Ast increase by 9 mm, compared to (R).

Motor Powered battery bed (M) increases L2 by 52 mm. Ast increase by 45 mm, compared to (R).

The L2 and L4 measurements in the specification sheets are based on:

- RTF200: C battery
- RTF250: E battery.

RTF200: L2 measurement increases with 32 mm for battery size C-E and 72 mm with each battery size E-G.

RTF250: L2 measurement increases with 47 mm for battery size E-F and 72 mm for battery size F-G.

L4 measurement decreases with the corresponding figures.

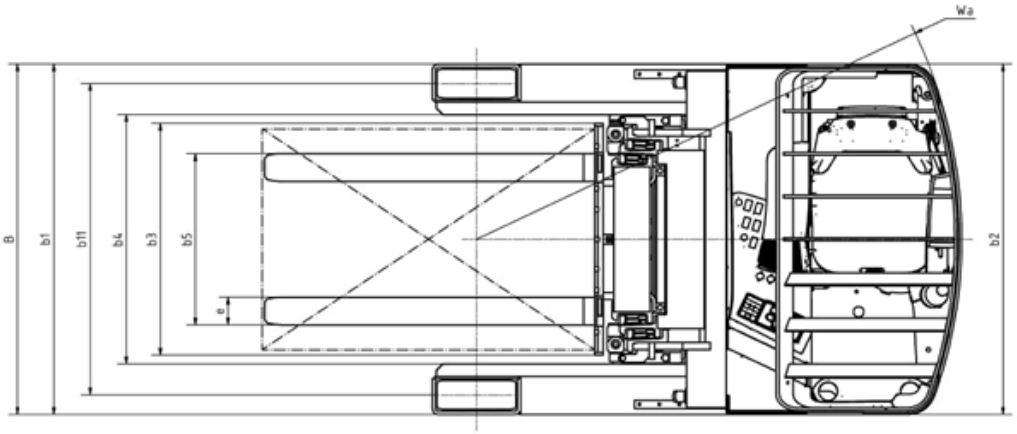
Maximum drive speed vs. driving direction (RTF200, RTF250)

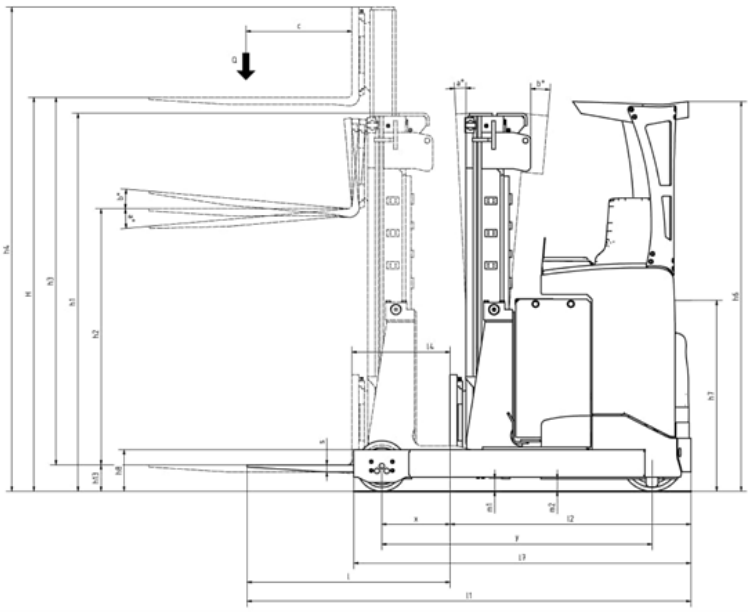
MAX. SPEED VS DRIVING DIRECTION	MAX DRIVE SPEED [KM/H]			STEERING SENSITIVITY
Load [kg]	< 1,000	> 1,000	> 1,500	-
Forward (with / without load)	13.0 / 13.0	13.0 / 13.0	13.0 / 13.0	100 %
Reverse	11.3	11.3	8.0	100 %
Lateral forward	9.6	9.6	9.6	50 %
Lateral reverse	6.0	6.0	6.0	50 %
Steered load wheel 0° <> 90°	4.2	4.2	4.2	100 %
Mast not fully reached in	4.0	4.0	4.0	100 %

4 TECHNICAL DRAWINGS

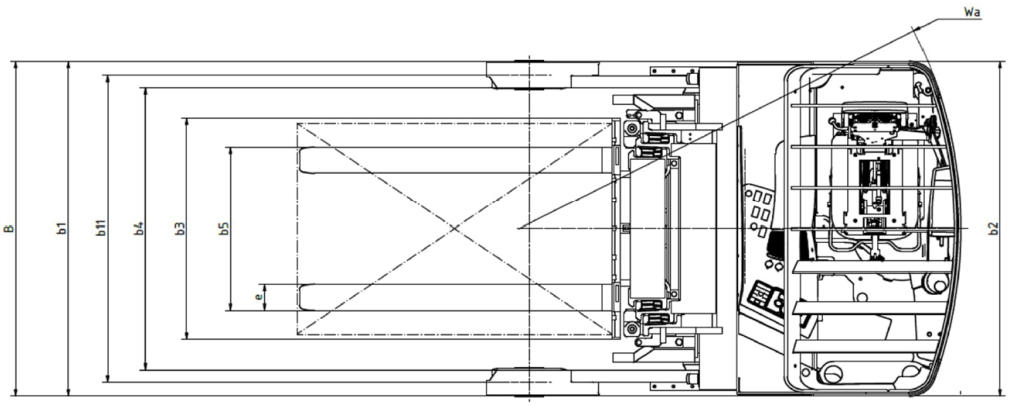
Wa	Turning radius	h1	Height with mast lowered
e	Fork width	h2	Free lift
s	Fork thickness	h3	Lift stroke
l	Fork length	h4	Height of mast extended
b1/b2 (B)	Overall width	h6	Height of overhead guard
b3	Width of fork carriage	h8	Height of wheel arms (support legs)
b4	Width between straddles	h13	Lowered fork height
b5	Width across forks	H	Lift height (h3+h13)
b10	Track width, front	m1	Ground clearance, mast
b11	Track width, rear	m2	Ground clearance, centre of wheelbase
l1	Overall length with forks	x	Load distance, axle to fork face
l2	Length to fork face	y	Wheelbase
l4	Reach travel	c	Load center
l7	Length of chassis	Q	Load capacity
		a°	Tilt angle, forward
		b°	Tilt angle, backward

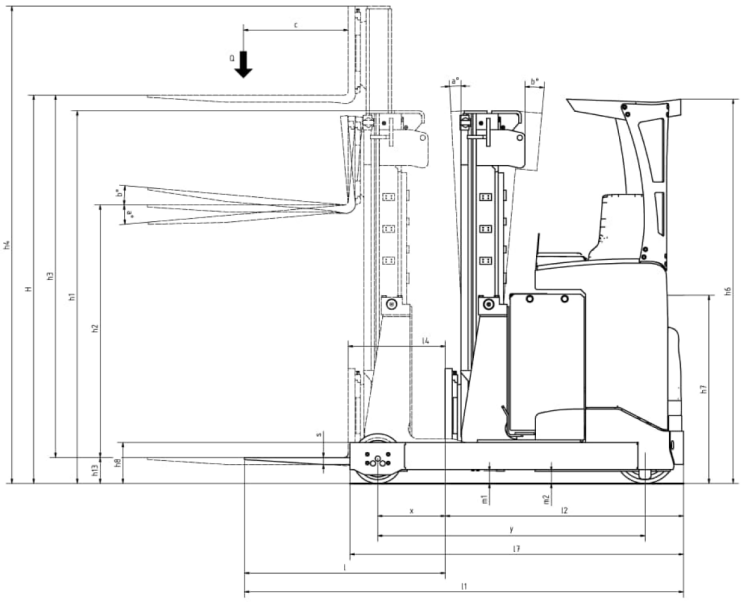
4.1 Technical drawings for RTL120/140, RTN140, RTM160/200, RTH160/200/250 and RTX200



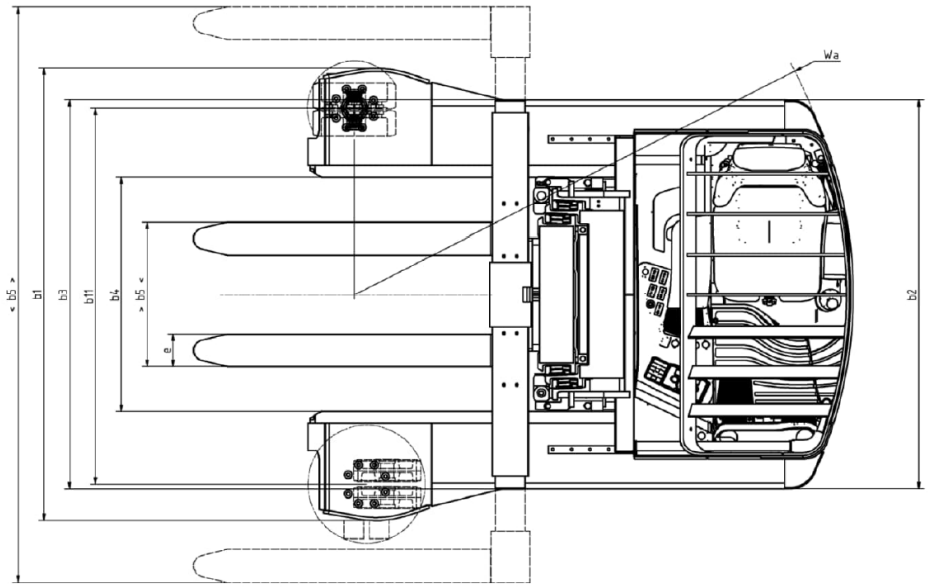


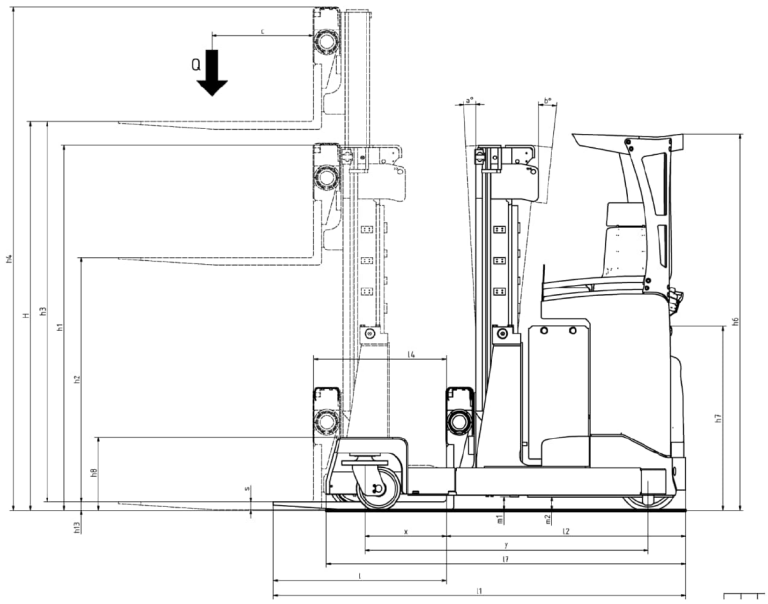
4.2 Technical drawings for RTH160S





4.3 Technical drawings for RTF200/250





5 BATTERIES

●	Available option
—	Not available
CSM	Special design

5.1 Battery types

BATTERY TYPE	NOTES	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Li-ion battery	1	●	●	●	●	●	●	●	●	●	●	●	●
Lead-acid battery		●	●	●	●	●	●	●	●	●	●	●	●

[1] Not in combination with Cold store design, 0°C to -35°C, Heated cabin, Key switch, or battery change (SBATT/ROLL and MBATT/ROLL).

5.2 Battery sizes

BATTERY SIZE	BATTERY TYPE	NOTES	CAPACITY	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Battery (A)	Lead-acid	1	max 310 Ah	●	—	—	—	—	—	—	—	—	—	—	—
Battery (C)		1	max 465 Ah	●	●	●	●	—	—	●	—	—	—	●	—
Battery (E)		2 3	max 620 Ah	—	●	●	●	●	●	●	●	—	—	●	●
Battery (F)		3 4 5	max 775 Ah	—	—	●	●	●	●	●	●	●	●	●	●
Battery (G)		3	max 930 Ah	—	—	—	—	●	—	—	●	●	●	●	●

[1] Not in combination with Heated cabin.

[2] On models RTL140, RTM160, RTM200, RTH160, RTH160S and RTH200, not in combination with Heated cabin.

[3] Battery cover plate (BATT/COVER) required if extra battery 620 Ah – 930 Ah is ordered.

[4] On model RTN140, Battery reach out (R) (BATT/RCH) not possible in combination with (F) battery.

[5] On model RTX200, (F) Battery only with (M) – Motor powered roller bed.

BATTERY SIZE	BATTERY TYPE	NOTES	CAPACITY	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
	Lithium-ion	6	222 Ah	●	●	●	—	—	—	—	—	—	—	—	—
			296 Ah	—	●	●	—	—	—	—	—	—	—	—	—
			370 Ah	—	—	—	●	●	●	●	●	—	—	●	●
			444 Ah	—	—	—	●	●	●	●	●	●	●	●	●

[6] Not in combination with Cold store design, Heated cabin, Key switch, or battery change (SBATT/ROLL and MBATT/ROLL).

5.3 Batteries and VDI

MODEL	BATTERY CAPACITY [AH]	BATTERY WEIGHT [KG]	4.33A AST [MM]	4.34A AST [MM]	4.28 L4 [MM]	4.20 L2 [MM]	4.19 L1 [MM]	1.8 X [MM]	4.35 WA [MM]
RTL120	310	533	2,643	2,688	557	1,193	2,343	405	1,598
	465	708	2,694	2,751	487	1,263	2,413	335	1,598
RTL140	465	708	2,694	2,751	487	1,263	2,413	335	1,598
	620	890	2,762	2,833	397	1,353	2,503	245	1,598
RTN140	465	708	2,716	2,771	457	1,293	2,443	305	1,598
	620	890	2,786	2,861	367	1,383	2,533	215	1,598
	775	1,063	2,859	2,945	227	1,473	2,623	125	1,598
RTM160	465	712	2,689	2,728	596	1,229	2,379	439	1,668
	620	892	2,740	2,792	524	1,301	2,451	367	1,668
	775	1,063	2,794	2,857	490	1,373	2,535	295	1,668
RTH160	620	892	2,768	2,832	418	1,335	2,485	306	1,773
	775	1,063	2,824	2,898	418	1,407	2,557	234	1,773
RTH160S	465	712	2,708	2,758	565	1,263	2,413	381	1,643
	620	892	2,761	2,823	493	1,335	2,485	309	1,643
	775	1,063	2,816	2,889	421	1,407	2,557	237	1,643
RTM200	620	892	2,770	2,808	625	1,310	2,460	551	1,750
	775	1,063	2,821	2,873	553	1,382	2,532	369	1,750
	930	1,240	2,875	2,938	481	1,454	2,604	297	1,750
RTH200	620	892	2,788	2,831	600	1,335	2,485	416	1,750
	775	1,063	2,839	2,895	528	1,407	2,557	344	1,750
	930	1,240	2,894	2,961	456	1,479	2,629	272	1,750
RTX200	930	1,240	2,906	2,976	430	1,495	2,645	256	1,750
RTH250	775	1,063	2,877	2,914	628	1,412	2,562	439	1,850
	930	1,240	2,928	2,978	556	1,484	2,634	367	1,850

5.4 Battery combinations

●	Available
O	Option
—	Not available

5.4.1 RTL120, RTL140

BATTERY VOLTAGE, 48V CELL TYPE: PZS (DIN) OR NMC (LI-ION)	RTL120			RTL140			
BATTERY COMBINATIONS		(A)	(C)			(C)	(E)
Battery type	Li-ION	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid
Battery capacity Ah, approx.	222	310	465	222	296	465	620
Battery tray article no.	—	147380	147381	—	—	147381	147382
Reach out battery (R) BATT/RCH	●	●	●	●	●	●	●
Battery on steel rollers (X) SBATT/ROLL	—	O	O	—	—	O	O

5.4.2 RTN140

BATTERY VOLTAGE, 48V CELL TYPE: PZS (DIN) OR NMC (LI-ION)	RTN140				
BATTERY COMBINATIONS			(C)	(E)	(F)
Battery type	Li-ION	Li-ION	Lead-Acid	Lead-Acid	Lead-Acid
Battery capacity Ah, approx.	222	296	465	620	775
Battery tray article no.	—	—	147381	147382	147383
Reach out battery (R) BATT/RCH	●	●	●	●	—
Battery on steel rollers (X) SBATT/ROLL	—	—	O	O	O

5.4.3 RTM160, RTM200

BATTERY VOLTAGE, 48V CELL TYPE: PZS (DIN) OR NMC (LI-ION)	RTM160					RTM200				
BATTERY COMBINATIONS	(C)	(E)			(F)	(E)			(F)	(G)
Battery type	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid
Battery capacity Ah, approx.	465	620	370	444	775	620	370	444	775	930
Battery tray article no.	147385	147386	—	—	147387	147386	—	—	147387	147388
Reach out battery (R) BATT/RCH	●	●	●	●	●	●	●	●	●	●
Battery on steel rollers (X) SBATT/ROLL	O	O	—	—	O	O	—	—	O	O
Motor power battery bed (M) MBATT/ROLL	—	—	—	—	O	—	—	—	O	—

5.4.4 RTH160, RTH160S, RTH200, RTH250

BATTERY VOLTAGE, 48V CELL TYPE: PZS (DIN) OR NMC (LI-ION)	RTH160				RTH160S					RTH200					RTH250		
BATTERY COMBINATIONS	(E)			(F)			(C)	(E)	(F)	(E)			(F)	(G)		(F)	(G)
Battery type	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid	Li-ION	Lead-Acid	Lead-Acid
Battery capacity Ah, approx.	620	370	444	775	370	444	465	620	775	620	370	444	775	930	444	775	930
Battery tray article no.	147386	—	—	147387	—	—		147386	147387	147386	—	—	147387	147388	—	147387	147388
Reach out battery (R) BATT/RCH	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Battery on steel rollers (X) SBATT/ROLL	O	—	—	O	—	—	O	O	O	O	—	—	O	O	—	O	O
Motor power battery bed (M) MBATT/ROLL	—	—	—	O	—	—	—	—	O	—	—	—	O	—	—	O	—

5.4.5 RTX200

BATTERY VOLTAGE, 48V CELL TYPE: PZS (DIN) OR NMC (LI-ION)	RTX200		
BATTERY COMBINATIONS		(F)	(G)
Battery type	Li-ION	Lead-Acid	Lead-Acid
Battery capacity Ah, approx.	444	775	930
Battery tray article no.	—	147387	147388
Reach out battery (R) BATT/RCH	•	—	•
Battery on steel rollers (X) SBATT/ROLL	—	—	O
Motor power battery bed (M) MBATT/ROLL	—	O	—

5.4.6 RTF200, RTF250

BATTERY VOLTAGE, 48V CELL TYPE: PZS (DIN) OR NMC (LI-ION)	RTF200						RTF250				
BATTERY COMBINATIONS	(C)	(E)			(F)	(G)	(E)			(F)	(G)
Battery type	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid
Battery capacity Ah, approx.	465	620	370	444	775	930	620	370	444	775	930
Battery tray article no.	147385	147386	—	—	147387	147388	147386	—	—	147387	147388
Reach out battery (R) BATT/RCH	•	•	•	•	•	•	•	•	•	•	•
Battery on steel rollers (X) SBATT/ROLL	O	O	—	—	O	O	O	—	—	O	O
Motor power battery bed (M) MBATT/ROLL	—	—	—	—	—	—	—	—	—	O	—

5.5 Battery options

•	Available option
—	Not available

5.5.1 Battery carriages

BATTERY VOLTAGE, 48V CELL TYPE: PZS (DIN) OR NMC (LI-ION)	RTF200						RTF250				
BATTERY COMBINATIONS	(C)	(E)			(F)	(G)	(E)			(F)	(G)
Battery type	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid	Lead-Acid	Li-ION	Li-ION	Lead-Acid	Lead-Acid
Battery capacity Ah, approx.	465	620	370	444	775	930	620	370	444	775	930
Battery tray article no.	147385	147386	—	—	147387	147388	147386	—	—	147387	147388
Reach out battery (R) BATT/RCH	•	•	•	•	•	•	•	•	•	•	•
Battery on steel rollers (X) SBATT/ROLL	O	O	—	—	O	O	O	—	—	O	O
Motor power battery bed (M) MBATT/ROLL	—	—	—	—	—	—	—	—	—	O	—

5.5.2 Batteries

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Battery, Exide 48V 310 Ah		BW48D310E	●	—	—	—	—	—	—	—	—	—	—	—
Battery, Exide 48V 465 Ah		BW48D465E	●	●	●	●	—	—	●	—	—	—	●	—
Battery, Exide 48V 620 Ah	1	BW48D620E	—	●	●	●	●	●	●	●	—	—	●	●
Battery, Exide 48V 775 Ah	1	BW48D775E	—	—	●	●	●	●	●	●	●	●	●	●
Battery, Exide 48V 930 Ah	1	BW48D930E	—	—	—	—	●	—	—	●	●	●	●	●
Li-ion battery 222 Ah 48V	2	BL48D222T	●	●	●	—	—	—	—	—	—	—	—	—
Li-ion battery 296 Ah 48V	2	BL48D296T	—	●	●	—	—	—	—	—	—	—	—	—
Li-ion battery 48V 370 Ah	2	BL48D370T	—	—	—	●	●	●	●	●	—	—	●	●
Li-ion battery 48V 444 Ah	3	BL48D444T	—	—	—	●	●	●	●	●	●	●	●	●
Li-ion battery 48V 444 Ah Large	3	BL48X444T	—	—	—	—	●	—	—	●	●	●	●	●

[1] Battery cover plate (BATT/COVER) required if extra battery 620 Ah – 930 Ah is ordered.

[2] [3] Not in combination with Cold store design, Heated cabin, Key switch, or battery change (SBATT/ROLL and MBATT/ROLL).

5.5.3 Chargers

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Access HF charger 40 A		CHAHF40E	●	●	●	—	—	—	—	—	—	—	—	—
Access HF charger 640 A		CHAHF60E	●	●	●	●	●	—	—	—	—	—	●	●
Access HF charger 80 A		CHAHF80E	●	●	●	●	●	●	●	●	●	●	●	●
Access HF charger 100 A		CHAHF100E	●	●	●	●	●	●	●	●	●	●	●	●
Access HF charger 130 A		CHAHF130E	●	●	●	●	●	●	●	●	●	●	●	●
Access HF charger 165 A		CHAHF165E	—	—	—	—	●	—	—	●	●	●	●	●
Sharp HF charger 30 A		CHSHF30E	●	●	●	—	—	—	—	—	—	—	—	—
Sharp HF charger 40 A		CHSHF40E	●	●	●	●	●	—	—	—	—	—	—	—
Sharp HF charger 60 A		CHSHF60E	●	●	●	●	●	●	●	●	●	●	●	●
Sharp HF charger 80 A		CHSHF80E	●	●	●	●	●	●	●	●	●	●	●	●
Sharp HF charger 100 A		CHSHF100E	●	●	●	●	●	●	●	●	●	●	●	●
Sharp HF charger 130 A		CHSHF130E	●	●	●	●	●	●	●	●	●	●	●	●
Sharp HF charger 165 A		CHSHF165E	—	—	—	—	●	—	—	●	●	●	●	●
Li-Ion charger 48V 150 A		CH48/150T	●	●	●	●	●	●	●	●	●	●	●	●
Li-Ion charger 48V 300 A		CH48/300T	—	—	—	●	●	●	●	●	●	●	●	●

5.5.4 Battery and charger equipment

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Easy access charge arm		EASY/ACCES	●	●	●	●	●	●	●	●	●	●	●	●

5.6 Option descriptions (battery)

EASY ACCESS CHARGE ARM	EASY/ACCES
Charger equipment for li-ion batteries. The charge arm is attached to the wall.	

6 GENERAL OPTIONS

6.1 Option availability

•	Standard equipment
O	Available option
—	Not available

See Option descriptions for details.

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Automatic electric parking brake			•	•	•	•	•	•	•	•	•	•	•	•
Steering wheel angle indicator			•	•	•	•	•	•	•	•	•	•	•	•
Battery indicator with cut out at 20% remaining battery level			•	•	•	•	•	•	•	•	•	•	•	•
Multifunctlonal colour display			•	•	•	•	•	•	•	•	•	•	•	•
Integrated sideshift DTFV mast			•	•	•	•	•	•	•	•	•	•	•	•
Rail guidance for Drive In Rackin		SGR150	—	—	O	—	—	—	—	—	—	—	—	—
Electric adjustable floor height			—	—	—	•	•	•	•	•	•	•	•	•
Suspension seat with weight-controlled tilting high backrest			—	—	—	•	•	•	•	•	•	•	•	•
Increased drive speed 14.5 km/h		H/SPEED	—	—	—	O	O	O	O	O	—	—	—	—
Chill store design, down to +1° C			•	•	•	•	•	•	•	•	•	•	•	•
Paper storage and cup holder			•	•	•	•	•	•	•	•	•	•	•	•
Battery reach out (R)	1	BATT/RCH	•	•	•	•	•	•	•	•	•	•	•	•
Battery on steel rollers (X)	2	SBATT/ROLL	O	O	O	O	O	O	O	O	O	O	O	O
Motor power battery bed	3	MBATT/ROLL	—	—	—	O	O	O	O	O	O	O	—	O
Li-ion option	4	LIKIT	O	O	O	O	O	O	O	O	O	O	O	O
Other RAL-color		SP/COLOR	O	O	O	O	O	O	O	O	O	O	O	O

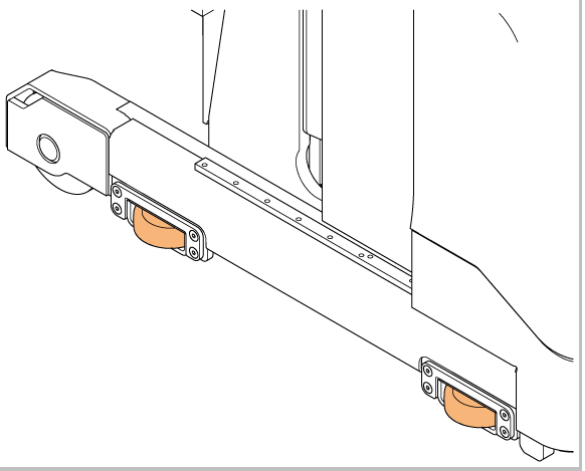
[1] On model RTN140, Battery reach out (R) not in combination with (F) battery.

[2] See *5.4 Battery combinations*for detailed availability information for different batteries.

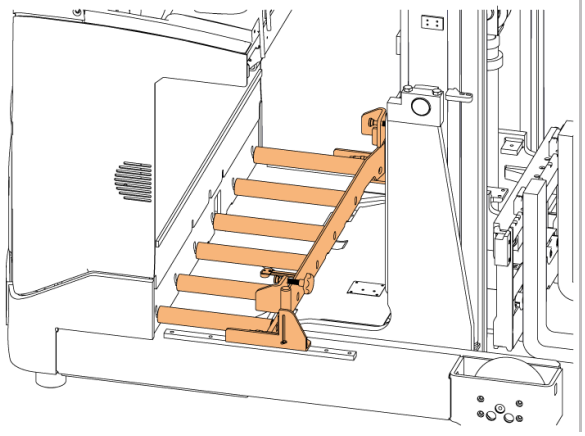
[3] Motor power battery bed only with 775 Ah battery.

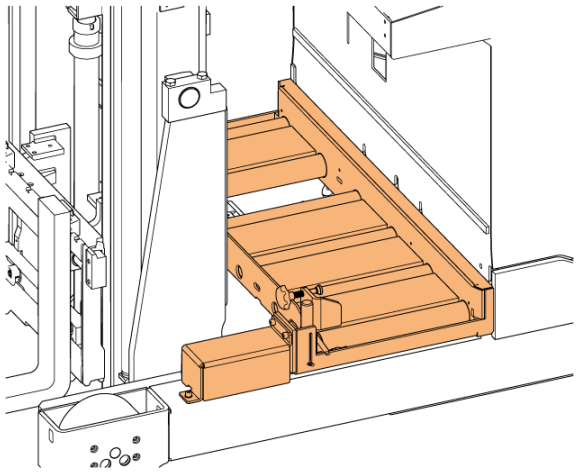
[4] Not together with cold store modification, steel rollers, motor power battery bed or heated cabin.

6.2 Option descriptions (general)

RAIL GUIDANCE FOR DRIVE IN RACKIN	SGR150
Horizontal Ø 150mm wheels. Width over rollers, A=1190 mm. Recommended width between guide rails, C=1200 mm. NOTE: For RTN140 only.	

INCREASED DRIVE SPEED 14.5 KM/H	H/SPEED
Max speed is 14.5 km/h. NOTE: Available only for RTM160, RTM200, RTH160, RTH160Sand RTH200.	

BATTERY ON STEEL ROLLERS (X)	SBATT/ROLL
Equipped with steel rollers for durability and low force needed. Patented solution. NOTE: Not in combination with li-ion battery. NOTE: See *5.4 Battery combinations* for detailed availability for different batteries.	

MOTOR POWER BATTERY BED	MBATT/ROLL
The unique Motor Power battery bed facilitates a complete battery change in 60 seconds. Height of rollers over floor 315 mm. Includes an SB50 2-pole connector, cable and battery clamp. The motor is speed-regulated for easy manoeuvring and low energy consumption. A power socket for external power is fitted under the normal power glove. Power supply 24V/20A is not included. NOTE: Not available on RTL120, RTL140, RTN140 and RTF200. NOTE: Not in combination with li-ion battery. NOTE: Only with 775 Ah battery. NOTE: See *5.4 Battery combinations* for detailed availability for different batteries.	
LITHIUM-READY OPTION	**LIKIT**
This option enables you to install alternative battery lease/rental schemes. NOTE: **Lithium ready option is only applicable for batteries approved by MLE. For more details, please refer to the Lithium sales manual on the dealer Support Site.** NOTE: Not together with cold store modification, steel rollers, motor power battery bed or heated cabin.	

7 MAST, FORK AND CARRIAGE OPTIONS

7.1 Option availability

•	Standard equipment
O	Available option
—	Not available
CSM	Special design

See Option descriptions for details.

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Narrow chassis, B1=1,120 mm			•	•	•	—	—	—	—	—	—	—	—	—
Standard chassis, B1 = 1,270 mm		CHASS1270	—	—	—	•	•	•	•	O	—	—	—	—
Wide chassis, B1 = 1,397 mm		CHASS1397	—	—	—	—	O	O	—	•	•	•	—	—
Wide chassis, B1 = 1,498 / 1,744 mm (min / max)			—	—	—	—	—	—	—	—	—	—	•	•
Tilting mast	1		•	•	•	•	•	•	•	•	•	—	•	•
Fork tilt	1 2	1D/4U	—	—	O	O	O	O	O	O	O	•	—	—
Integral Fork positioner/sideshift DTFV mast	3	INSS/FP	O	O	O	O	O	O	O	O	O	—	—	—
Integral Sideshifter 920 mm		INSS	O	O	—	—	—	—	—	—	—	—	—	—
Integral Fork positioner 560 - 1550 mm		FP15	—	—	—	—	—	—	—	—	—	—	•	•
Hydraulic fork spread width b5 = 560 - 2220 mm		FP22	—	—	—	—	—	—	—	—	—	—	O	O
Manual Fork positioner 560 - 1550 mm		FPM15	—	—	—	—	—	—	—	—	—	—	O	O
Manual Fork positioner 560 - 2220 mm		FPM22	—	—	—	—	—	—	—	—	—	—	O	O
Load backrest		BACKREST	O	O	O	O	O	O	O	O	O	O	—	—
Load backrest in combination with Fork positioner/Sideshift		BCKREST/S	O	O	O	O	O	O	O	O	O	—	—	—
Mast tilt control, (std @ lift height > 7.2 m, Option < 7.2 m)	4	MTC	•	•	•	•	•	•	•	•	•	—	•	•
Lift stop with restart	4 5	LIFT/STOPR	O	O	O	O	O	O	O	O	O	O	O	O
Lift stop without restart	4 5	LIFT/STOP	O	O	O	O	O	O	O	O	O	O	O	O
Lift height indicator	4 5	LHI	O	O	O	O	O	O	O	O	O	O	•	•
Level assistance system	7	LAS	—	—	O	O	O	O	O	O	O	O	O	O

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Load weight indicator	4 6 8	LWI	O	O	O	O	O	O	O	O	O	O	●	●
Lift height preselector	9	LHP	—	—	O	O	O	O	O	O	O	O	O	O
Fork camera with RLED display	10	F/CAM/RLED	—	—	—	O	O	O	O	O	O	O	O	O
Reverse camera with RLED display	15	R/CAM/RLED	—	—	—	—	—	—	—	—	—	—	O	O
Mast inner camera with RLED display		M/CAM/RLED	—	—	—	O	O	O	O	O	O	O	O	O
Fork carriage camera with RLED display		C/CAM/RLED	—	—	—	O	O	O	O	O	O	O	O	O
Horizontal fork control		FORK/H	—	—	O	O	O	O	O	O	O	O	O	O
Central position of sideshift		SS/CENTR	—	—	O	O	O	O	O	O	O	O	—	—
S3 - Stability support system with soft motion		S3	O	O	●	●	●	●	●	●	●	●	●	●
Fork safe zone system		FSZ	—	—	—	—	—	—	—	—	—	—	O	O
Reach in and Lowering stop function	16	RCH/LOW	O	O	O	O	O	O	O	O	O	O	—	—
Dual safety function/clamp release	17	D/A 5VFC	—	—	O	O	O	O	O	O	O	O	—	—
Loose mast		LOOSE/MAST	O	O	O	O	O	O	O	O	O	O	O	O
Pair of forks 800 mm		L800	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 850 mm		L850	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 900 mm		L900	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 950 mm		L950	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1000 mm		L1000	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1050 mm		L1050	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1100 mm		L1100	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1150 mm	21	L1150	●	●	●	●	●	●	●	●	●	●	●	●
Pair of forks 1200 mm		L1200	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1250 mm	18	L1250	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1300 mm	18	L1300	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1350 mm	18	L1350	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1400 mm	18	L1400	O	O	O	O	O	O	—	O	O	O	O	O
Pair of forks 1500 mm	18	L1500	—	—	—	O	O	O	—	O	O	O	O	O
Pair of forks 1600 mm	18	L1600	—	—	—	O	O	O	—	O	O	O	O	O
Pair of forks 1700 mm	18 19	L1700	—	—	—	O	O	O	—	O	O	O	O	O
Pair of forks 1800 mm	18 19	L1800	—	—	—	O	O	O	—	O	O	O	O	O
Pair of forks 1900 mm	18 19	L1900	—	—	—	O	O	O	—	O	O	O	O	O

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Pair of forks 2000 mm	18 19	L2000	—	—	—	O	O	O	—	O	O	O	O	O
Telescopic forks for double deep stacking ISO 2A 1140 x 830	10 11 12 13	TF114X0830	—	—	—	—	O	—	—	O	O	—	—	—
Telescopic forks for double deep stacking ISO 2A 1190 x 880	10 11 12 13	TF119X0880	—	—	—	—	O	—	—	O	O	—	—	—
Telescopic forks for double deep stacking ISO 2A 1390 x 1080	10 11 12 13	TF139X1080	—	—	—	—	O	—	—	O	O	—	—	—
Telescopic forks for double deep stacking ISO 3A 1165 x 860	10 11 12 13	TF116X0860	—	—	—	—	—	—	—	—	O	—	—	—
Telescopic forks for double deep stacking ISO 3A 1360 x 1055	10 11 12 13	TF136X1055	—	—	—	—	—	—	—	—	O	—	—	—
Strong telescopic forks	10 11 12 13 14	TFS136X105	—	—	—	—	—	—	—	—	O	—	—	—
Fork extensions ISO 2A 800 x 350	10 12	FE080X0350	—	—	O	O	O	O	—	O	O	O	—	—
Fork extensions ISO 2A 1200 x 400	10 12	FE120X0400	—	—	O	O	O	O	—	O	O	O	—	—
Fork extensions ISO 2A 1400 x 1000	10 12	FE140X1000	—	—	O	O	O	O	—	O	O	O	—	—
Additional valve for fingertip control		FINGER/TIP/5V	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for fingertip control (extended forks)		5EX	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for fingertip control (fork positioner)		5SP	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for fingertip control (telescopic forks)		5TF	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for fingertip control (blanco)		5AH	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for fingertip control (blanco) high flow		5AHH	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for fingertip control (clamp 5V)	20	5CL	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for ergologic joystick		ERGO/LOGIC/5V	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for ergologic joystick (extended forks)		5EX/EL	O	O	O	O	O	O	O	O	O	O	—	—

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Additional valve for ergologic joystick (fork positioner)		5SP/EL	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for ergologic joystick (telescopic forks)		5TF/EL	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for ergologic joystick (blanco)		5AH/EL	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for ergologic joystick (blanco) high flow		5AHH/EL	O	O	O	O	O	O	O	O	O	O	—	—
Forks deletion		FX	O	O	O	O	O	O	O	O	O	O	—	—
Additional valve for ergologic joystick (blanco) high flow		5AHH/EL	O	O	O	O	O	O	O	O	O	O	—	—
Forks deletion		FX	O	O	O	O	O	O	O	O	O	O	—	—

[1] See the table in section *7.3 Mast system options*.

[2] Not in combination with INSS/FP or INSS.

[3] On models RTN140, RTM160, RTM200, RTH160(S), RTH200 and RTH250, not in combination with Fork tilt or Fork camera.

[4] On models RTL120 and RTL140, only together with S3.

[5] The truck can be equipped with either the ‘with restart’ option or the ‘without restart’ option, not both.

[6] Standard in S3-2 Increased performance.

[7] Does not include free lift stroke.

[8] Not in combination with Cold store design.

[9] Not in combination with LAS option.

[10] Not in combination with INSS/FP.

[11] RTM200: lift height over 8750 mm not allowed. RTH200: lift height over 8450 mm not allowed with small battery. Lift height over 10200 mm requires large or extra large battery.

[12] Double deep forks requires additional hydraulic with high flow. Extension forks requires additional hydraulic with regular flow.

[13] Requires load wheel ø230 mm.

[14] Requires extra large battery.

[15] Not in combination with Reverse travel mirror. -12

[16] S3 is required.

[17] Only with fingertip control FINGER/TIP.

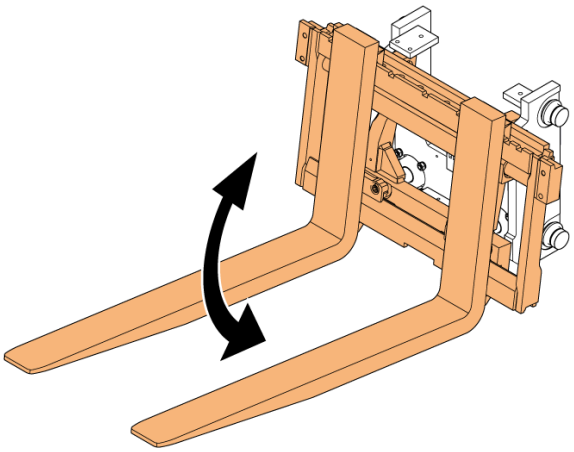
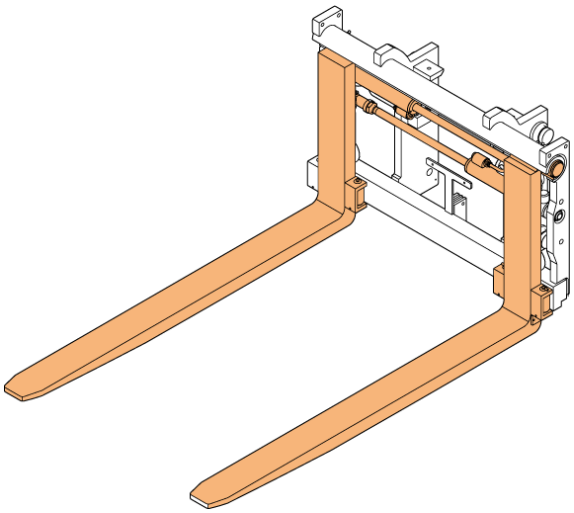
[18] On RTM160 with battery options R/X and DTFV895: Not available with mast tilt, fork tilt and 465 Ah battery or mast tilt and 620 Ah battery.

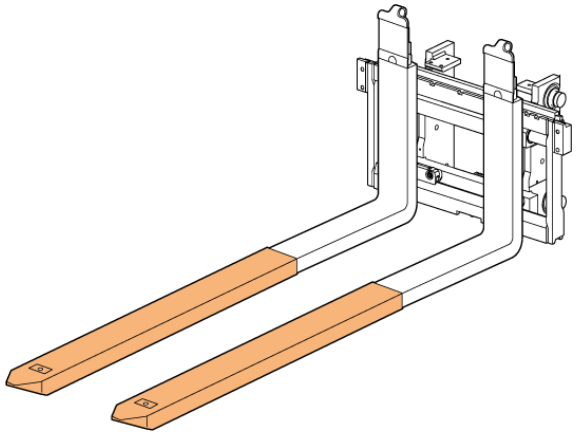
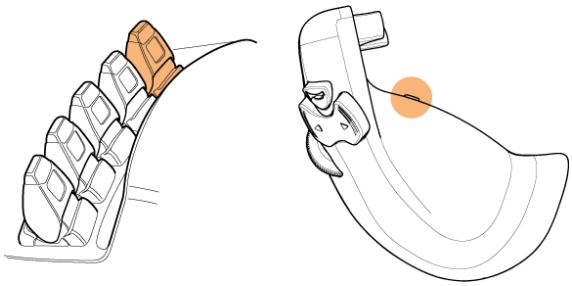
[19] On RTM160 with battery options R/X and DTFV845: Not available with mast tilt, fork tilt and 465 Ah battery.

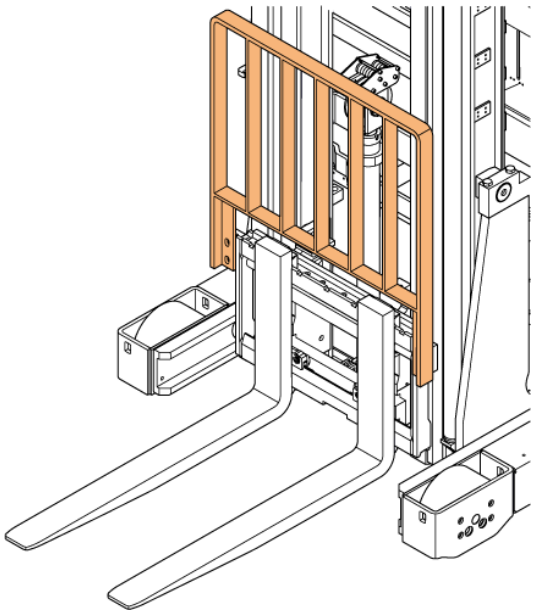
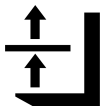
[20] Requires D/A 5VFC.

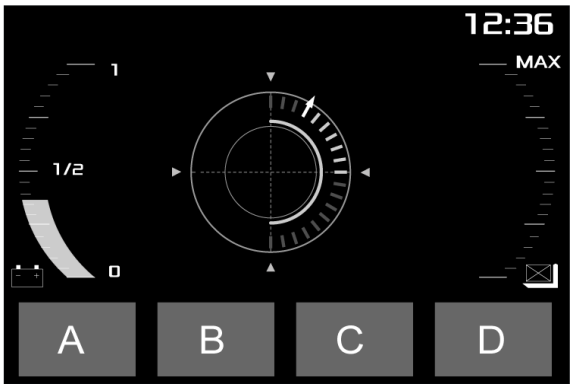
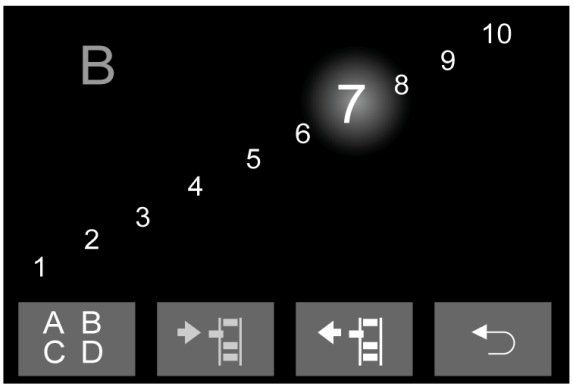
[21] For RTH160S, only FEM forks 100x40-1150 available.

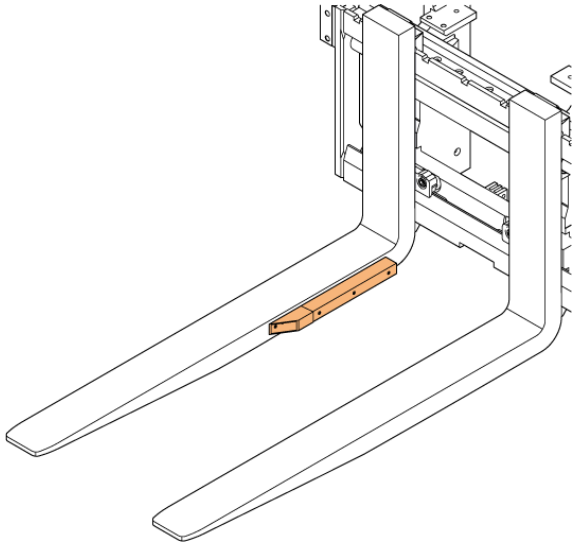
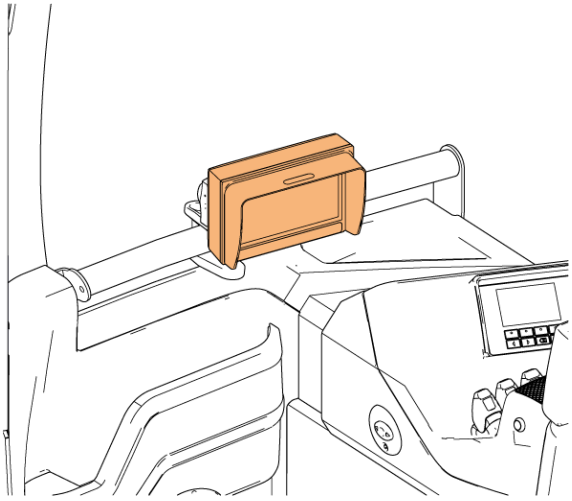
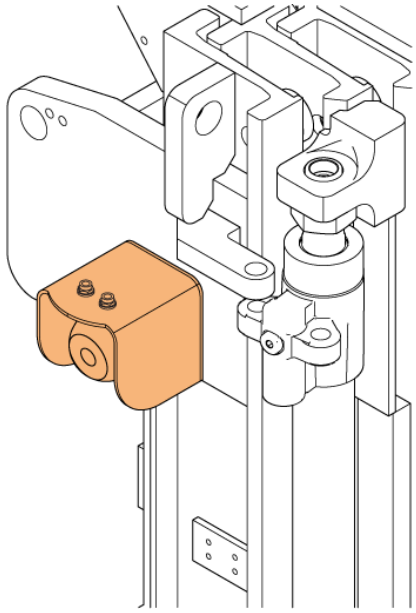
7.2 Option descriptions (mast, fork and carriage)

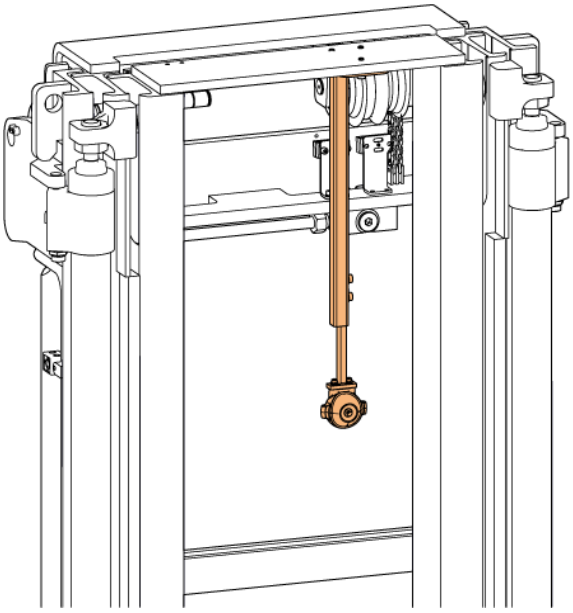
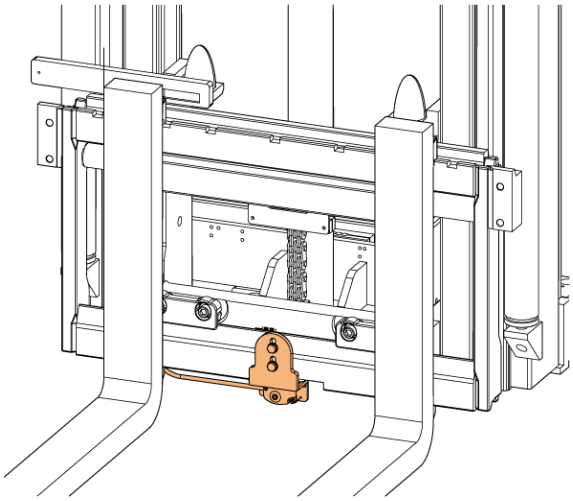
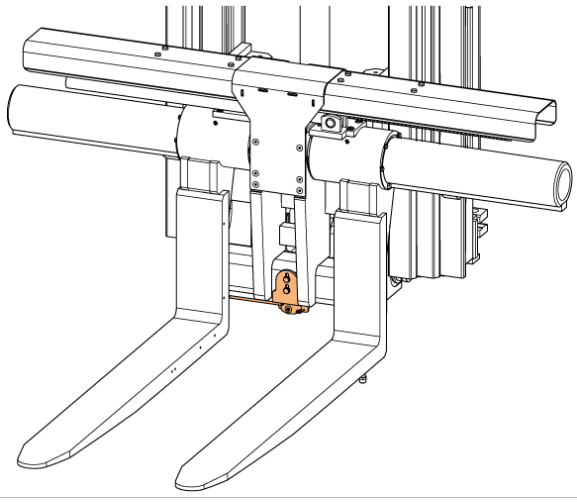
FORK TILT	1D/4U
Maximum fork angle 4° up and 1° down. Fork tilt extends AST with 25 mm when used. NOTE: Not in combination with INSS/FP or INSS.	
INTEGRAL FORK POSITIONER/SIDESHIFT DTFV MAST	**INSS/FP**
For models RTL120/RTL140, RTN140, RTM160/RTM200 and RTH160(S)/RTH200: • C-type attachments are used (3 different models) offering great visibility, and the forks are fixed with brass bushings. Fork dimensions 1,150 x 100 x 40 mm. • Integral Fork positioner/sideshift, b5=400-800 mm, C - type. Integral design with excellent visibility. No change of AST measure L1=1150 mm, (other lengths are Special Design). Variable sideshift stroke with maximum sideshift +/- 100 mm at B5=600 mm. Sideshift stroke is +/- 0 mm when forks are in a completely open or closed position. Not available on RTX200. For model RTH250: • A Shaft Forks type is used. This is an attachment for tough applications and requirement of high quality and a rigid design. • Forks are sliding on a bar for excellent stability and strength still offering very good visibility through fork carriage. Fork dimensions 1,150 x 100 x 45 mm. NOTE: Not in combination with Fork tilt or Fork camera. Available on Mast Tilt only.	

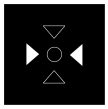
TELESCOPIC FORKS FOR DOUBLE DEEP STACKING	TF114X0830, TF119X0880, TF139X0108, TF116X0860, TF136X1055
STRONG TELESCOPIC FORKS FOR DOUBLE DEEP STACKING	TFS136X105
FORK EXTENSIONS	FE080X0350, FE120X0400, FE140X1000
Telescopic forks for double deep stacking. NOTE: Fork extensions are for different pallet length handling, not to be used as telescopic forks. ISO 3A (h1=568 mm) and ISO 2A (h1=470 mm) height difference is 98mm. Mast height h4 dimension is 98 mm lower with ISO 3A. For specifications, see *Telescopic forks specifications*. NOTE: Not with INSS/FP	
FINGERTIP CONTROL ADDITIONAL VALVE ERGOLOGIC JOYSTICK ADDITIONAL VALVE	**FINGER/TIP/5V ERGO/LOGIC/5V 5EX, 5SP, 5TF, 5AH, 5AHH, 5CL, 5EX/EL, 5SP/EL, 5TF/EL, 5AH/EL, 5AHH/EL**
In the configurator you will get first the selection ERGO/LOGIC, FINGET/TIP, ERGO/LOGIC/5V or FINGERT/TIP/5V. The selection of EGRO/LOGIC/5V or Finger/TIP/5V is needed for telescopic forks or Fork Extensions. Then there is a selection normal flow or HIGH FLOW (5AHH), after this you need to select the desired label: • 5EX for Extension Forks • 5SP for Aftermarket Fork Spreader • 5TF for Telescopic Forks • 5AH it is blanco • 5CL for Clamp HIGH FLOW is requested for telescopic forks, LOW FLOW for fork extensions.	

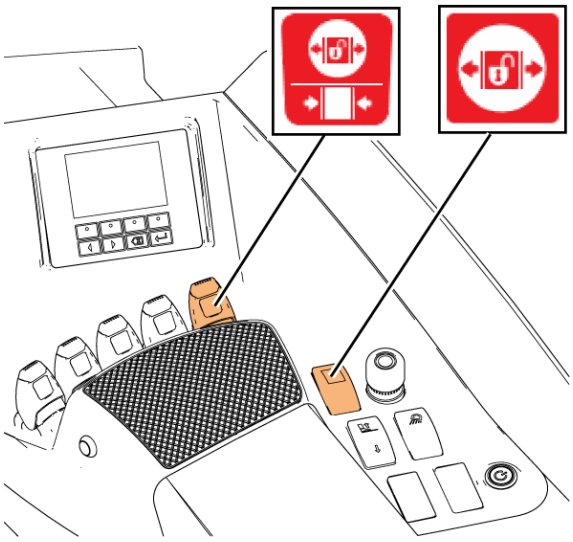
LOAD BACKREST	BACKREST
Height 1,200 mm over forks. NOTE: Free lift H2 is reduced: H2 = H1 - 1,200 mm.	
LIFT STOP WITH RESTART **LIFT STOP WITHOUT RESTART**	**LIFT/STOPR** **LIFT/STOP**
Stops the lift at an exact height in 100 mm steps. Useful if there are different ceiling heights in the warehouse. If the option includes restart, override by pressing Mast override button (see image on the right) on the keyboard. NOTE: The truck can be equipped with either the 'with restart' option or the 'without restart' option, not both. NOTE: On models RTL120 and RTL140, only together with S3.	
LIFT HEIGHT INDICATOR	**LHI**
Shows the actual fork level on the display. Does not measure free lift stroke. Included in S3-2 Increased performance. NOTE: On models RTL120 and RTL140, only together with S3.	

LEVEL ASSISTANCE SYSTEM	LAS
Appropriate in applications with limited number of beam levels. Lifting stops at the next level by reducing the lift speed to less than 80 % of the max lift speed. Activates automatically over free lift stroke. No levels possible in free lift stroke. Minimum distance between levels is 600 mm (recommended > 1,000 mm). Not including free lift stroke. NOTE: Levels must be programmed before use. NOTE: Not in combination with LHP.	
LOAD WEIGHT INDICATOR	**LWI**
Indicates the load weight in the display, accuracy +/-50 kg stationary below 0.5 m. When the forks are above 0.5 m, a measurement is still performed but with lower accuracy (+/- 100 kg), incl. accumulated weight sum and Tare function. Included in S3-2 Increased performance. NOTE: On models RTL120 and RTL140, only together with S3. NOTE: Not in combination with cold store design.	
LIFT HEIGHT PRESELECTOR	**LHP**
This option allows the operator to select a shelf level with pre programmed lifting height. The forks will stop automatically at the selected height. Levels must be programmed by a service technician before use. First selectable level is above free lift. NOTE: Not in combination with LAS option.	

FORK CAMERA WITH RLED DISPLAY	F/CAM/RLED
Good view even with pallet on. Robust, difficult to damage. The camera is heated as standard. Perfect in cold store application because the lens will not fog. Stainless steel housing, easy to keep clean. NOTE: Not available for models RTL120, RTL140 and RTN140. NOTE: Not in combination with INSS/FP.	 
REVERSE CAMERA WITH RLED DISPLAY	**R/CAM/RLED**
NOTE: Only available for models RTF200 and RTF250. AMOS Camera at the left side of the mast top. 7” monitor with adjustable clamp bracket. Lens angle adapted for best view behind the truck. View what is behind the truck on the monitor. NOTE: Not in combination with Reverse travel mirror.	

MAST INNER CAMERA WITH RLED DISPLAY	M/CAM/RLED
The mast camera on reach trucks works by providing the operator with a clear, real-time view of the area around the forklift's forks and mast. The camera is mounted on the mast of the reach truck, that gives a good view of the forks and the load being handled. The camera live video and transmits it to a monitor in the operator's cabin. This allows the operator to see the forks, the load, and the surrounding area without having to rely solely on direct line of sight. This setup is particularly useful when handling loads at height or in tight spaces, where visibility is often limited. The camera helps the operator to align the forks accurately with the load and the storage location.	
FORK CARRIAGE CAMERA WITH RLED DISPLAY	**C/CAM/RLED**
The camera is mounted in the middle below the fork carriage of the reach truck to provide a complete view beneath the pallet to provide a good view to the beams of the racking system. The camera live video and transmits it to a monitor in the operator's cabin. This allows the operator to see the racking beam and the load. This setup is particularly useful when handling loads at height or in tight spaces, where visibility is often limited. The camera helps the operator to align the forks accurately with the load and the storage location.	 

HORIZONTAL FORKS	FORK/H
The tilt system adjusts the forks to their horizontal position when Horizontal forks button (see image on the right) is pressed on the keyboard. NOTE: Not available for models RTL120 and RTL140.	
CENTRAL POSITION OF SIDESHIFT	**SS/CENTR**
Adjusts the forks to their central position when Central position button (see image on the right) is pressed on the keyboard. NOTE: Not available for models RTL120 and RTL140.	
S3 - STABILITY SUPPORT SYSTEM WITH SOFT MOTION	**S3**
Soft Motion: Reach-, Tilt- and Sideshift speed optimized for ultimate performance and stability combination. Dynamic Curve Control. Reduced speed in fork direction. Reduced speed when mast is not retracted. Reduced tilt and reach speed at height. Transport position indicator (sound signal). Soft stop, reduces the lift speed to 50 % at 700 mm from max lift height. NOTE: Available as option for models RTL120 and RTL140, standard on all other models.	
FORK SAFE ZONE SYSTEM	**FSZ**
Prohibit the forks from hitting the straddle legs in the following actions: Standard hydraulic fork spread b5 = 560 - 1550 mm and optional hydraulic fork spread b5 = 560 - 2220 mm. Hydraulic action on actual fork position Fork safe zone function: Reach mast in: Forks are directly in front of straddle legs (wheel houses). Not possible to reach mast in. Lowering forks: Forks are directly over straddle legs (wheel houses). Lowering stop forks at 600 mm over floor. Spreading forks: Forks are lower than 600 mm and mast not fully reached out. Fork stop spreading when b5 ≈ 830 mm. Option: Hydraulic fork spread width b5 = 560 - 2220 mm only. Hydraulic action on actual fork position Fork safe zone function. Closing forks: Forks are spread to maximum, mast retracted and forks lower than 600 mm. Forks stop closing when b5 ≈ 2180 mm. When Fork safe zone system prohibit any function – an indicator on the display will be lit flashing. Override is possible by pushing button “5” on keyboard. NOTE: Available only on . NOTE: Fork Safe Zone option is only available with Standard Hydraulic Fork Positioner b5 = 560 - 1550 mm or optional Hydraulic Fork Positioner b5 = 560 - 2220 mm.	

REACH IN AND LOWERING STOP FUNCTION	RCH/LOW
This option is recommended if you have an attachment on the fork carriage or long load which can collide with the straddle legs of the reach truck. With this option, every time the operator lowers the forks, they will stop at 500 mm above ground level and the operator needs to press an override button on the HMI20 display to lower the forks below 500 mm. S3 is required.	
DUAL SAFETY FUNCTION/CLAMP RELEASE	**D/A 5VFC**
If a reach truck is equipped with a clamp, there is the need to have 2 switches with special decals to prevent the clamp from opening unintentionally. Both must be pressed simultaneously. NOTE: Only available for fingertip control. NOTE: When you select D/A 5VFC, additional hydraulic is included	
LOOSE MAST	**LOOSE/MAST**
This option is for ordering of a single mast only if there is a need to change the mast on a reach truck or stacker, e.g. in case of damage, replace the mast to a lower or higher lift height on a reach truck or stacker in the rental, STH/UE or demo fleet etc. NOTE: You can only order loose masts which are available from the price list for the reach truck or stacker models for which you want to change the mast.	

Telescopic forks specifications

Table 1: Telescopic forks specifications

OPTION CODE	BACKREST	CAMERA	MOUNTING CLASS	LOAD LENGTH	STROKE	RETRACTED LENGTH	EXTENDED LENGTH	EXS	SHANK THICKNESS	FORK BACK TO PALLET STOP	TOTAL LOST LOAD THICKNESS
TF114x0830	—	—	2A	1000	830	1140	1970	161x57	45	140	180
TF119x0880	o	—	2A	1000	880	1190	2070	161x57	45	165	210
TF119x0880	—	—	2A	1000	880	1190	2070	161x57	45	190	235
TF139x1080	o	—	2A	1200	1080	1390	2470	161x57	45	165	210
TF139x1080	—	—	2A	1200	1080	1390	2470	161x57	45	190	235
TF139x1080	o	o	2A	1200	1080	1390	2470	161x57	45	165	210
TF139x1080	—	o	2A	1200	1080	1390	2470	161x57	45	190	235
TF116x0860	o	—	3A	1000	860	1165	2025	161x57	45	140	185
TF116x0860	—	—	3A	1000	860	1165	2025	161x57	45	165	210
TF136x1055	—	—	3A	1200	1055	1360	2415	161x57	45	160	205
TF136x1055	—	o	3A	1200	1055	1360	2415	161x57	45	160	205

Table 2: Strong telescopic forks specifications

OPTION CODE	MOUNTING CLASS	LOAD LENGTH	STROKE	RETRACTED LENGTH	EXTENDED LENGTH	EXS	SHANK THICKNESS	FORK BACK TO PALLET STOP	TOTAL LOST LOAD THICKNESS
TFS136x105	3A	1200	1055	1360	2415	161x62	50	160	210

7.3 Mast system options

●	Standard equipment
O	Available option
—	Not available

OPTION		CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Narrow 1,4 t DTFV-mast system	Mast tilt 1°/3°	1F/3B	LD	LD	–	–	–	–	–	–	–	–	–	–
Narrow 1,4 t DTFV-mast system	Mast tilt 1°/1°	1F/1B	–	LD	–	–	–	–	–	–	–	–	–	–
Wide 1,6 t DTFV-mast system	Mast tilt 1°/3°	1F/3B	–	–	LD	MD	–	HD	HD	–	–	–	–	–
Wide 1,6 t DTFV-mast system	Mast tilt 1°/1°	1F/1B	–	–	LD	MD	–	HD	O	–	–	–	–	–
Wide 2,0 t DTFV-mast system	Mast tilt 1°/3°	1F/3B	–	–	–	–	MD	–	O	HD	–	–	–	–
Wide 2,0 t DTFV-mast system	Mast tilt 1°/1°	1F/1B	–	–	–	–	MD	–	–	HD	–	–	–	–
Wide 2,5 t DTFV-mast system	Mast tilt 1°/3°	1F/3B	–	–	–	–	–	–	–	–	HD	–	–	–
Wide 2,5 t DTFV-mast system	Mast tilt 1°/1°	1F/1B	–	–	–	–	–	–	–	–	HD	–	–	–
Mast 1,5/3,5 deg forward/back (H3 < 6,350)	Mast tilt 1.5°/3.5°	1,5F/3,5B	–	–	–	–	–	–	–	–	–	–	O	O
Mast1/1 deg forward/back (std incl H3 > 6,750)	Mast tilt 1°/1°	1F/1B	–	–	–	–	–	–	–	–	–	–	O	O
Mast 1/3 deg forward/back (std incl H3 ≤ 6,750)	Mast tilt 1°/3°	1F/3B	–	–	–	–	–	–	–	–	–	–	O	O
Wide DTFV-mast system	Fork tilt 1°/4°	1D/4U	–	–	O	O	O	O	O	O	O	HX	–	–
Sideshift DTFV mast system	Integral		●	●	●	●	●	●	●	●	●	●	–	–
Fork positioner/sideshift DTFV mast	Integral	INSS/FP	O	O	O	O	O	O	O	O	O	–	–	–

LD = Light duty

MD = Medium duty

HD = Heavy duty

HX = Heavy duty extra

8 DRIVE AND LIFT CONTROL OPTIONS

8.1 Option availability

●	Standard equipment
O	Available option
—	Not available

See Option descriptions for details.

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Electric power Mini steering in floating armrest	1		●	●	●	●	●	●	●	●	●	●	●	●
180 degree steering			●	●	●	●	●	●	●	●	●	●	●	●
360 degree steering	2	ELEC/S360	O	O	O	O	O	O	O	O	O	O	O	O
Active Spin Reduction		ASR	O	O	O	O	O	O	O	O	O	O	O	O
DCC – Dynamic cornering control			●	●	●	●	●	●	●	●	●	●	●	●
Hands-free direction control, HFDC, in accelerator pedal			●	●	●	●	●	●	●	●	●	●	—	—
Hand-operated direction control	3	HODC	O	O	O	O	O	O	O	O	O	O	●	●
Ergologic joystick	4	ERGO/LOGIC	●	●	●	●	●	●	●	●	●	●	●	●
Fingertip controls	5	FINGER/TIP	O	O	O	O	O	O	O	O	O	O	O	O
Midi steering wheel	1	MIDI/STEER	O	O	O	O	O	O	O	O	O	O	O	O
Key switch entry	6	KEYSWITCH	O	O	O	O	O	O	O	O	O	O	O	O
Drive speed reduction (Creep speed at preset level 500 mm)		DSR500	—	—	O	O	O	O	O	O	O	O	—	—
Drive speed reduction (Creep speed at preset level 600 mm)		DSR600	—	—	—	—	—	—	—	—	—	—	O	O
Drive speed reduction (Creep speed at other levels, reduction in 100 mm steps above 2100 mm)	7	DSRXXX	—	—	O	O	O	O	O	O	O	O	O	O
S3-2 Increased performance	8	INCR/PERF	O	O	O	O	O	O	O	O	O	O	●	●

[1] Midi steering is standard for narrow cabin, no Mini steering possible.

[2] Includes option Hand operated direction control (HODC) instead of Hands free direction control (HFDC).

[3] Replace Hands-free direction control (HFDC).

[4] Not in combination with Canopy storage design on RTF200-250.

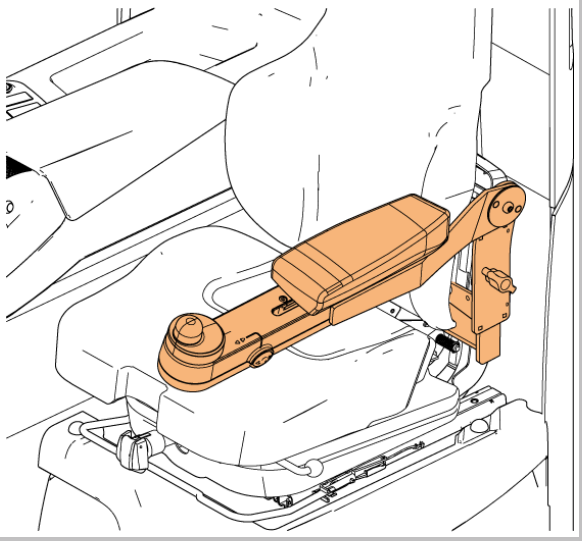
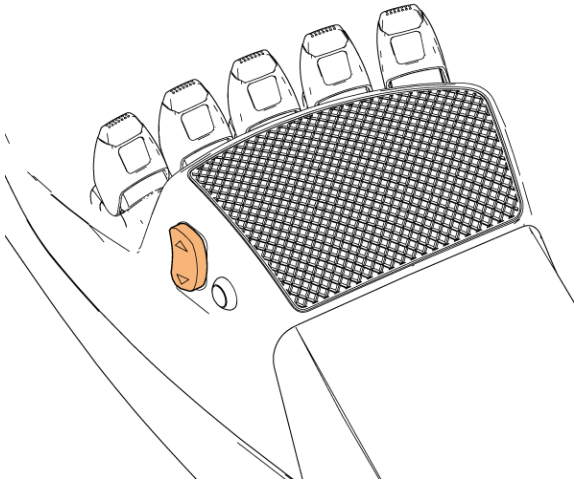
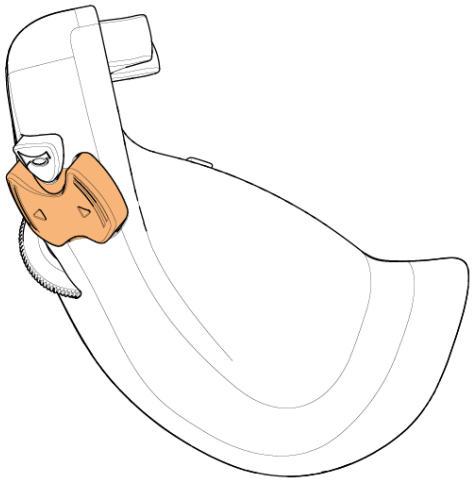
[5] Standard in Cold store design.

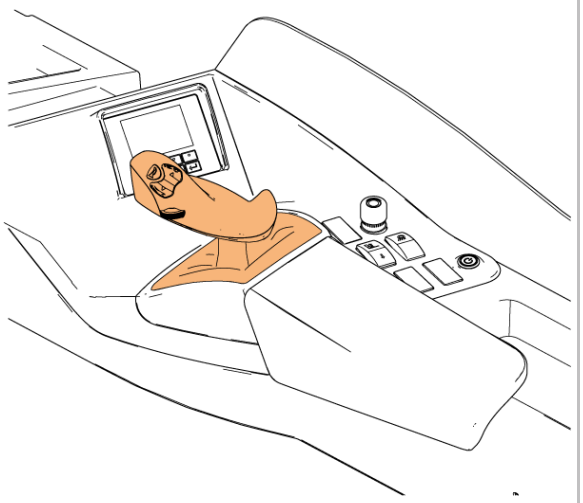
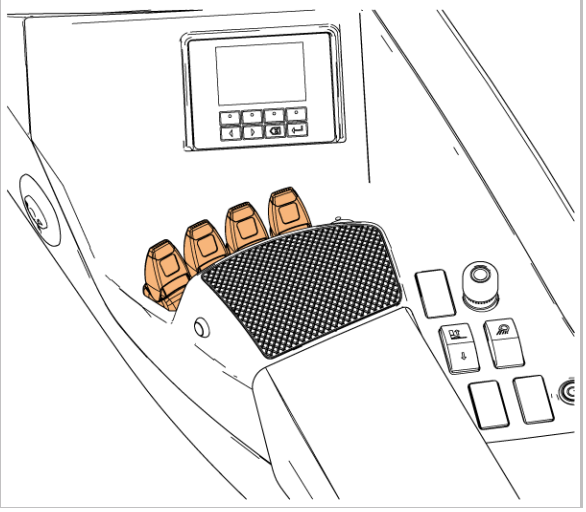
[6] Not in combination with Li-ion battery.

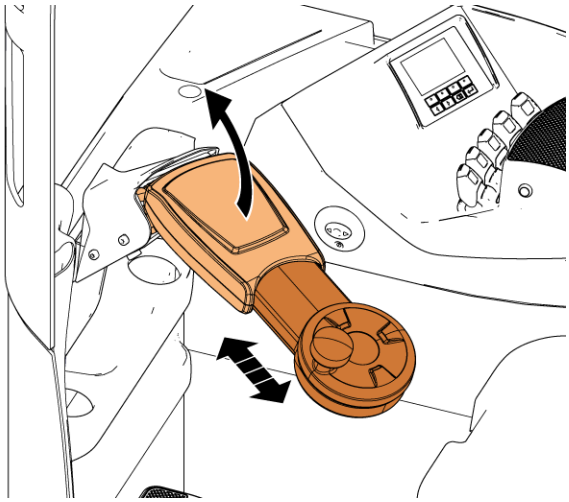
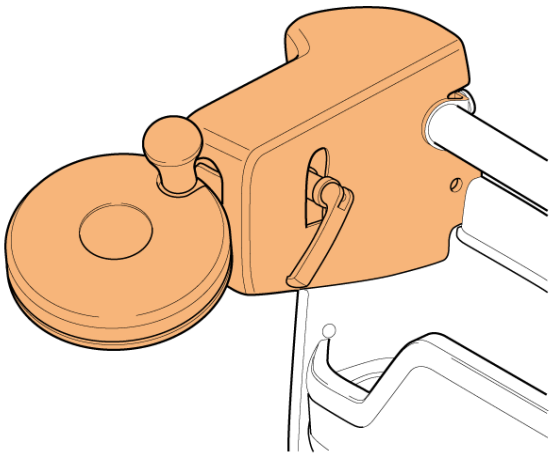
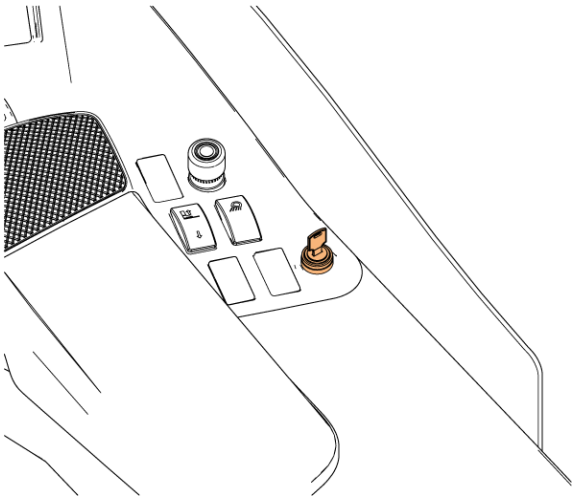
7 Does not include free lift stroke.

[9] Not in combination with Cold store design.

8.2 Option descriptions (drive and lift control)

ELECTRIC POWER MINI STEERING IN FLOATING ARMREST	
Standard in all models. NOTE: Not for the heated tapered narrow cabin.	
360 DEGREE STEERING	**ELEC/S360**
Replaces 180° steering. Includes option Hand-operated direction control (HODC) instead of Hands-free direction control (HFDC).	
HAND-OPERATED DIRECTION CONTROL	**HODC**
Replaces the Hands-free direction control (HFDC). Direction control in Thumb control. The truck always starts up in neutral. No direction switches in the accelerator pedal. NOTE: Included in option 360 degree steering. NOTE: Also available for Ergologic joystick.	 

ERGOLOGIC JOYSTICK	ERGO/LOGIC
NOTE: Ergologic is not available in combination with Canopy storage design on RTF200-250.	
FINGERTIP CONTROLS	**FINGER/TIP**
Conventional levers. Close together for improved ergonomics. Rubber-coated controls for grip and comfort. NOTE: Standard in Cold store design.	

MIDI STEERING WHEEL	MIDI/STEER
Adjustable in length. Adjustable in height. Adjustable angle. Foldable upwards to max opening the step in and out ways. Foldable downwards to the adjusted position. NOTE: Only Midi steering available for narrow cabin. NOTE: A different type of midi steering wheel is used with the narrow cabin. See the image below.	 
KEY SWITCH ENTRY	**KEY SWITCH**
Replaces the PIN code entry. 2 keys are supplied. NOTE: Not in combination with Li-ion battery.	

DRIVE SPEED REDUCTION (CREEP SPEED AT PRESET LEVEL 500 / 600 MM)	**DSR500/DSR600**
DRIVE SPEED REDUCTION (CREEP SPEED AT OTHER LEVELS)	**DSRXXX**
Default creep speed is 6 km/h. Default creep speed 40 % of max speed over preset 500 mm lift height (600 mm in RTF200 and RTF250). (Creep speed is adjustable between 20-80 % of max speed.) If version “other levels” is chosen, note H3 height (not free lift stroke) in the order. DSRXXX is not available below 2100 mm lift height, default creep speed is 3 km/h. NOTE: Does not include free lift stroke.	
S3-2 INCREASED PERFORMANCE	**INCR/PERF**
Measures the load weight every time the forks are lifting. Load weight rounded to the nearest 100 kg and shown on the display. Admits faster travel speed with light loads compared to std S3. Includes the option Height indicator. Includes the option Weight indicator. NOTE: Not in combination with Cold store design.	

9 ELECTRICAL OPTIONS

9.1 Option availability

•	Standard equipment
O	Available option
—	Not available

See Option descriptions for details.

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Red point safety light, towards driving direction	1	REDSPT/O	O	O	O	O	O	O	O	O	O	O	O	O
Blue point safety light, towards driving direction	1	BLUESPT/O	O	O	O	O	O	O	O	O	O	O	O	O
Red point safety light, towards fork direction	2	REDSPT/FO	O	O	O	O	O	O	O	O	O	O	O	O
Blue point safety light, towards fork direction	2	BLUESPT/FO	O	O	O	O	O	O	O	O	O	O	O	O
Red Stripe Lights beside the chassis option	2	RED/STRIPE	O	O	O	O	O	O	O	O	O	O	O	O
Automatic logoff		AUTOLOGOFF	O	O	O	O	O	O	O	O	O	O	O	O
Working lights LED		WORK/L	O	O	O	O	O	O	O	O	O	O	O	O
Working lights LED for cabin		WORK/L/CAB	O	O	O	O	O	O	O	O	O	O	O	O
Warning light on overhead guard		WARN/LIGHT	O	O	O	O	O	O	O	O	O	O	O	O
Warning light for Heated cabin		W/LIGHT/C	O	O	O	O	O	O	O	O	O	O	O	O
12 V DC Power socket		12V CONN	O	O	O	O	O	O	O	O	O	O	O	O
12 V DC Power socket for cabin		12V CONN/C	O	O	O	O	O	O	O	O	O	O	O	O
24 V DC Power socket		24V CONN	O	O	O	O	O	O	O	O	O	O	O	O
24 V DC Power socket for cabin		24V CONN/C	O	O	O	O	O	O	O	O	O	O	O	O
Radio with MP3	3 4 5	RADIO/MP3	O	O	O	O	O	O	O	O	O	O	O	O
Radio with MP3 for cabin	6	RADIO/MP3C	—	—	—	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM
Service alarm		SERV/ALARM	O	O	O	O	O	O	O	O	O	O	O	O
Battery level audible warning		BATT/L/WRN	O	O	O	O	O	O	O	O	O	O	O	O

[1] Either RED/LAMP or BLUE/LAMP can be selected, not both.

[2] Not in combination with cabin.

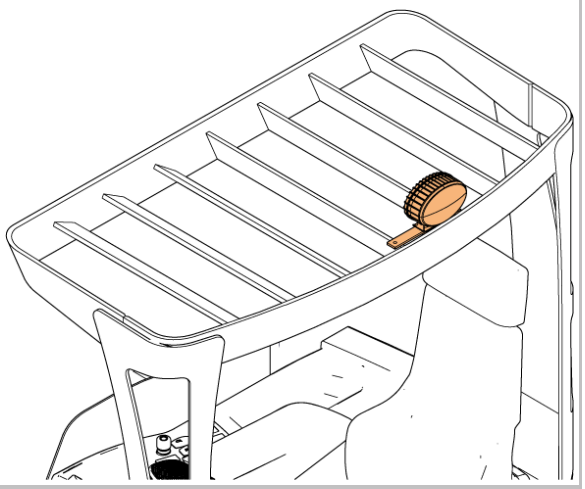
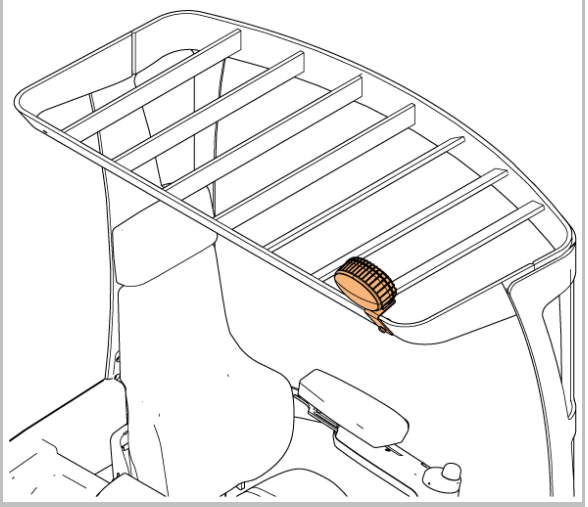
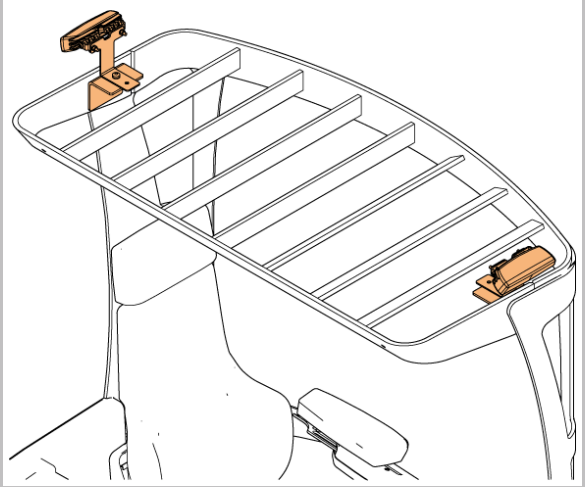
[3] On models RTL140 and RTN140, not in combination with Heated cabin.

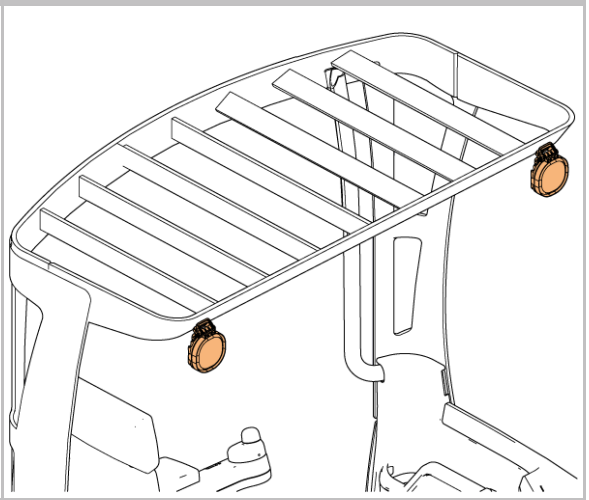
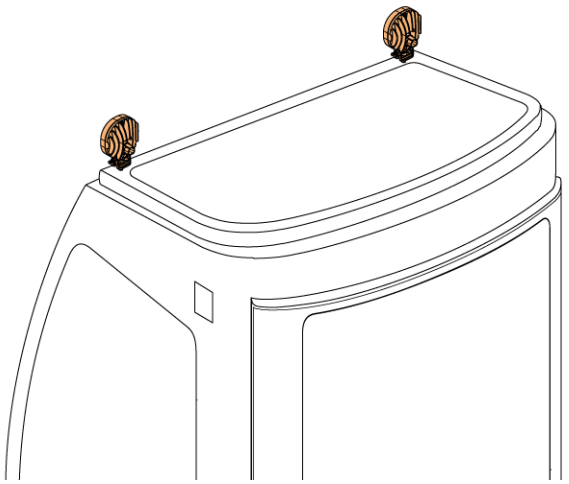
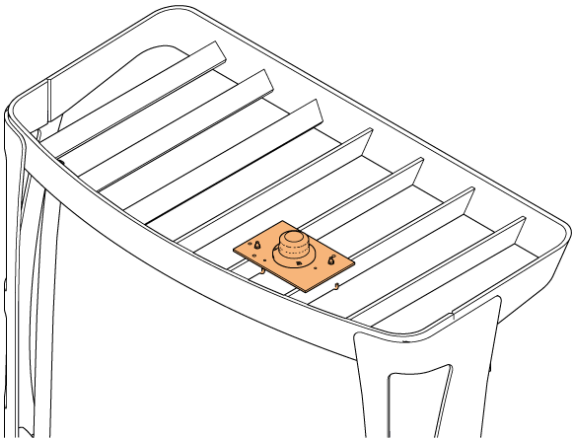
[4] On models RTL140 and RTN140, not in combination with Cold store design.

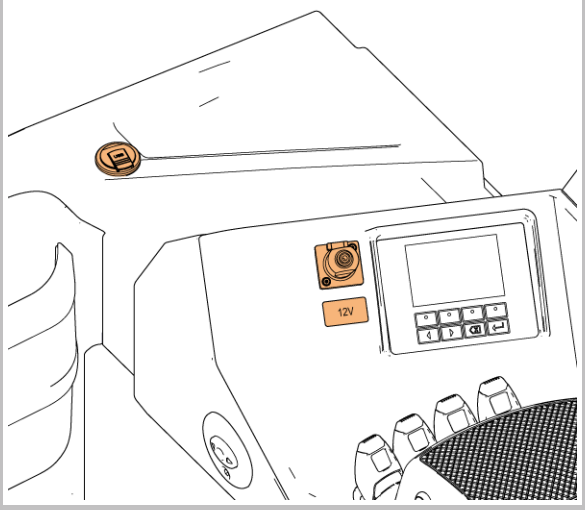
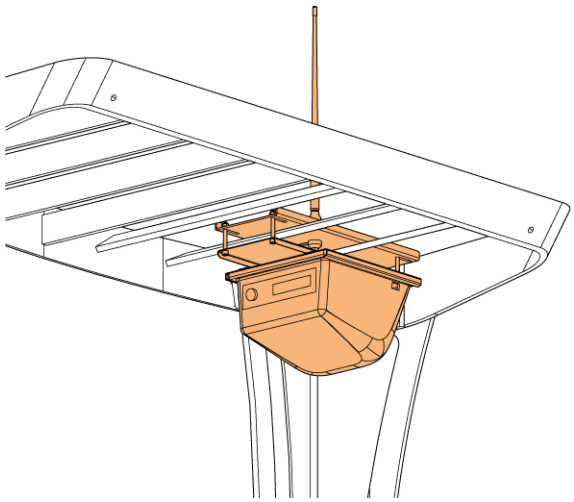
[5] On models RTM160, RTM200, RTH160, RTH160S, RTH200, RTH250, RTX200, if equipped with Cold store design, only available with Heated cabin.

[6] Available as CSM only.

9.2 Option descriptions (electrical)

RED POINT SAFETY LIGHT, TOWARDS DRIVING DIRECTION BLUE POINT SAFETY LIGHT, TOWARDS DRIVING DIRECTION	REDSPT/O BLUESPT/O
Activated when the button for Forward direction (Forks trailing) is pressed. The lamp is located on the overhead guard and provides a sharp blue/red dot on the floor, approx. 4-6 meters in front of the truck to warn other truck drivers and pedestrians. Blue/red lamp can be switched on/off permanently with a switch on dashboard. NOTE: Not in combination with Heated Cabin. NOTE: Either RED/LAMP or BLUE/LAMP can be selected, not both.	
BLUE POINT LIGHT IN FORK DIRECTION RED POINT LIGHT IN FORK DIRECTION	**BLUESPT/FO REDSPT/FO**
The point light is mounted on the overhead guard and it draws a spot light in blue or red on the ground in fork direction. NOTE: Not together with cabin.	
RED STRIPE LIGHTS BESIDE THE CHASSIS	**RED/STRIPE**
Red stripe warning lights to highlight the pedestrian danger zone on both sides of the truck with a visible light barrier NOTE: Not in combination with cabin.	

AUTOMATIC LOGOFF	AUTOLOGOFF
Truck power system and driver identity switched off. Default time is 5 minutes. Adjustable between 1-999 min.	
WORKING LIGHTS LED	**WORK/L**
Activated with a button on the dashboard. Mounted under the overhead guard. 2 lights with 24V 70W H3.	
WORKING LIGHTS LED FOR CABIN	**WORK/L/CAB**
Like WORK/L but mounted on top of the roof.	
WARNING LIGHT ON OVERHEAD GUARD	**WARN/LIGHT W/LIGHT/C**
Flashes when the truck is logged on.	

12V DC POWER SOCKET 12V DC POWER SOCKET FOR CABIN 24V DC POWER SOCKET 24V DC POWER SOCKET FOR CABIN	12V CONN 12V CONN/C 24V CONN 24V CONN/C
Options have one socket with plug and USB A & C socket and include the converter. Perfect for charging the mobile phone and MP3 etc. or temporary computer equipment. NOTE: A single converter to order is not possible.	
RADIO WITH MP3	**RADIO/MP3** **RADIO/MP3C**
Pioneer DEH-1800UB. AM/FM radio with RDS and TP. CD-player reads CD/-R/-RW: MP3 and WMA audio files. USB interface reads: FLAC, MP3, WAV and WMA audio files. 3.5 mm Aux for an external MP3 device. Detachable front panel. Mounted under the overhead guard. Includes: • Converter 48/12 V • Bendable antenna 380 mm • Loudspeaker • Cabin light. NOTE: On models RTL140 and RTN140, not in combination with Heated cabin. NOTE: On models RTL140 and RTN140, not in combination with Cold store design. NOTE: On models RTM160, RTM200, RTH160, RTH160S, RTH200, RTH250, RTX200, if equipped with Cold store design, only available with Heated cabin.	
SERVICE ALARM	**SERV/ALARM**
Informs that the truck is due for service. Audible warning signal sounds and a “Wrench” symbol is shown on the display after 1,000 hours (motor hours). Adjustable between 1-10,000 hours. Warning signal is reset by Mitsubishi authorized service.	

BATTERY LEVEL AUDIBLE WARNING	BATT/L/WRN
Low battery, preset at 25 % (adjustable), indicated by a sound from a buzzer.	

10 OHG AND CABIN OPTIONS

10.1 Option availability

●	Standard equipment
O	Available option
—	Not available

See Option descriptions for details.

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Heated cabin	1 2	HCAB	—	—	—	O	O	O	O	O	O	O	O	O
Heated cabin, narrow with tapered form	3 4	HCAB	—	O	O	—	—	—	—	—	—	—	—	—
2-Way intercom for Cold store cabin	5 6		—	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM
Window opening in cabin door	5		—	—	—	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM	CSM
Panoramic ProVision roof		PAN/ROOF	—	—	—	O	O	O	O	O	O	O	O	O
Tapered overhead guard	7	TAP/OHG	—	—	O	—	—	—	—	—	—	—	—	—
Mesh metal on overhead guard		MESH/METAL	O	O	O	O	O	O	O	O	O	O	O	O
Seat PVC		SEAT/P	—	—	—	O	O	O	O	O	O	O	O	O
Seat – low backrest, PVC		SEAT/PL	O	O	O	—	—	—	—	—	—	—	—	—
Seat – high backrest, PVC	8	SEAT/PH	O	O	O	—	—	—	—	—	—	—	—	—
Suspension seat fabric		SEAT/C	—	—	—	●	●	●	●	●	●	●	●	●
Suspension seat – low backrest, fabric		SEAT/CL	●	●	●	—	—	—	—	—	—	—	—	—
Suspension seat – high backrest, fabric	8	SEAT/CH	O	O	O	—	—	—	—	—	—	—	—	—
Heated seat fabric		S/HEAT/C	—	—	—	O	O	O	O	O	O	O	O	O
Heated seat low back – fabric		S/HEAT/CL	O	O	O	—	—	—	—	—	—	—	—	—
Heated seat high back – fabric	8	S/HEAT/CH	O	O	O	—	—	—	—	—	—	—	—	—
Heated seat PVC		S/HEAT/P	—	—	—	O	O	O	O	O	O	O	O	O
Heated seat low back – PVC		S/HEAT/PL	O	O	O	—	—	—	—	—	—	—	—	—
Heated seat high back – PVC	8	S/HEAT/PH	O	O	O	—	—	—	—	—	—	—	—	—
Headrest for seat	9	H/R	O	O	O	O	O	O	O	O	O	O	O	O
Seat Belt (Orange)	10	S/BELT	O	O	O	O	O	O	O	O	O	O	O	O
Rear view mirror	11	RVM	O	O	O	O	O	O	O	O	O	O	●	●
Reverse travel mirror	12	TVM	—	—	—	—	—	—	—	—	—	—	O	O

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Writing desk		LBA4	O	O	O	O	O	O	O	O	O	O	O	O
Writing desk for cabin		LBA4/CAB	—	—	—	O	O	O	O	O	O	O	O	O
Equipment bar	11	BAR	O	O	O	O	O	O	O	O	O	O	O	O
Equipment holder, RAM system size C		RAM/C	O	O	O	O	O	O	O	O	O	O	O	O
Equipment holder, RAM system size C, 2 pcs		RAM/C/2X	O	O	O	O	O	O	O	O	O	O	O	O
Equipment holder, RAM system size D		RAM/D	O	O	O	O	O	O	O	O	O	O	O	O

[1] Not in combination with Reverse travel mirror or Li-ion battery. See *Section 7.2* for battery requirements.

[2] Heated cabin combined with Motor power battery bed (M) is special design.

[3] Only with Midi steering wheel, Mini steering is not possible.

[4] Not in combination with Radio with MP3, Li-ion battery, or a seat with high backrest. See also *Section 7.2* for battery requirements.

[5] Available as CSM request only.

[6] If Cold design is selected, then in combination with Heated cabin only.

[7] Not in combination with a seat with high backrest.

[8] On models RTL140 and RTN140, not in combination with Tapered overhead guard or Narrow heated cabin.

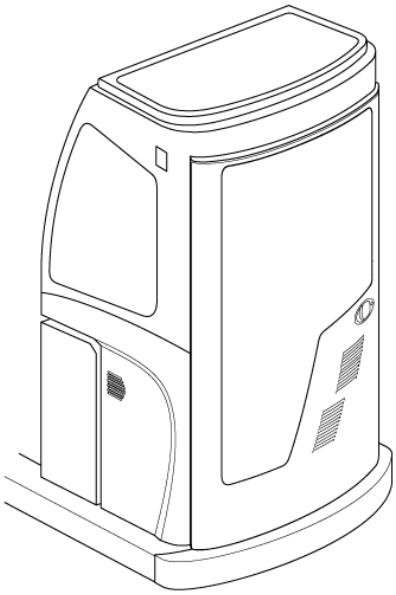
[9] Option for RTL120, RTL140 and RTN140 only in combination with high backrest seat.

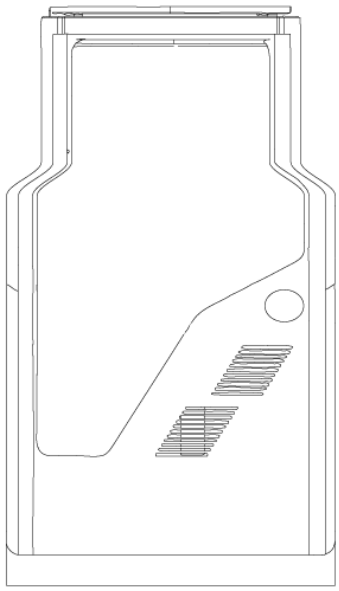
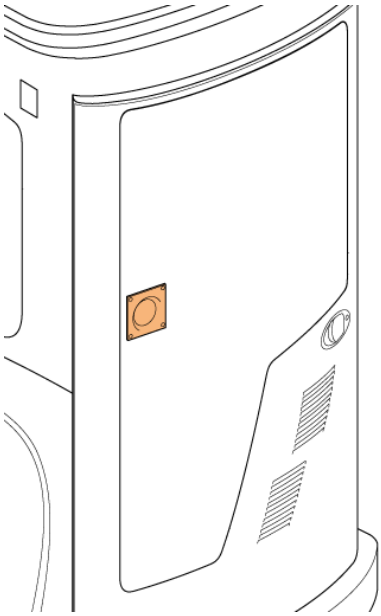
[10] Not available in combination with heated seat.

[11] On models RTL140, RTN140, RTM160, RTM200, RTH160(S), RTH200, RTH250, RTX200, RTF200 and RTF250, standard in Heated cabin.

[12] Not in combination with Heated cabin or Reverse camera.

10.2 Option descriptions (OHG and cabin)

HEATED CABIN	HCAB
Easy entry and exit. The bumper protects the cabin door and can be used as an extra entry step. Very spacious and silent. Inner volume increased by 40 % compared to previous model. Increases AST with 130 mm. Rear view mirror and Equipment bar are standard equipment. Emergency exit roof window (not for ventilation). Advanced heating system. Fully automatic electronic climate control for temperature and fan. Setting: Lo-18°- 28°-Hi. Heating power 3,000 W in two steps. In total 14 ventilator outlets for superb comfort and climate. Stepless fresh air mix intake. Includes seat–high backrest, fabric SEAT/CH. Available seat option SEAT/PH seat–high backrest, PVC. Automatic climate control (heating function only, no cooling). NOTE: Not in combination with Li-ion battery. NOTE: Not available for RTL120, RTL140 and RTN140.	

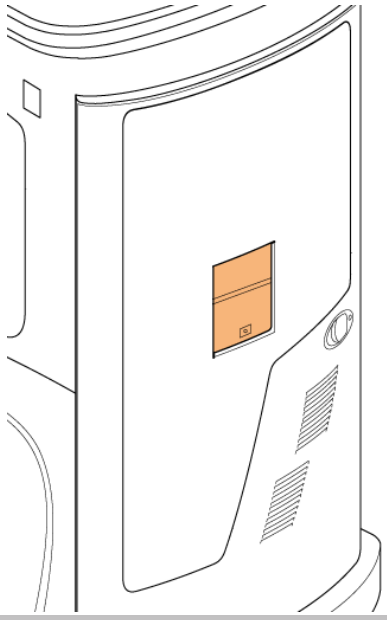
HEATED CABIN, NARROW WITH TAPERED FORM	HCAB
Comes always tapered. Includes Seat–low backrest, fabric. Available seat option SEAT/PL seat–low backrest, PVC. Midi steering wheel included as standard, Mini steering is not possible. NOTE: Not in combination with high backrest seat. NOTE: Not in combination with Radio with MP3. NOTE: Not in combination with Li-ion battery. NOTE: See also *5.2 Battery sizes* for battery requirements. NOTE: Available only for RTL120, RTL140 and RTN140.	
2-WAY INTERCOM FOR COLD STORE CABIN	
Communicate with persons outside the cabin without opening the cabin door. NOTE: Available as CSM request only.	

WINDOW OPENING IN CABIN DOOR

Pass for example papers in and out without opening the cabin door.

NOTE: Available as CSM request only.

NOTE: Not available for RTL120, RTL140 and RTN140.

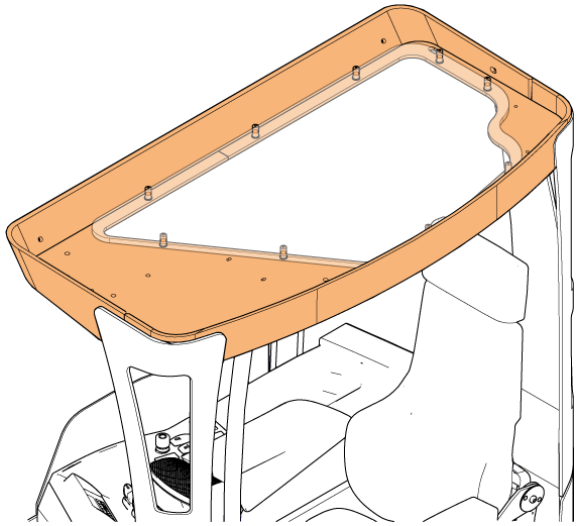


PANORAMIC PROVISION ROOF — PAN/ROOF

The overhead guard is equipped with a scratch-resistant polycarbonate roof for added visibility.

NOTE: The scratch-resistant polycarbonate roof for the PAN/ROOF does not include bars. The PAN/ROOF has passed the same safety tests as the default overhead guard.

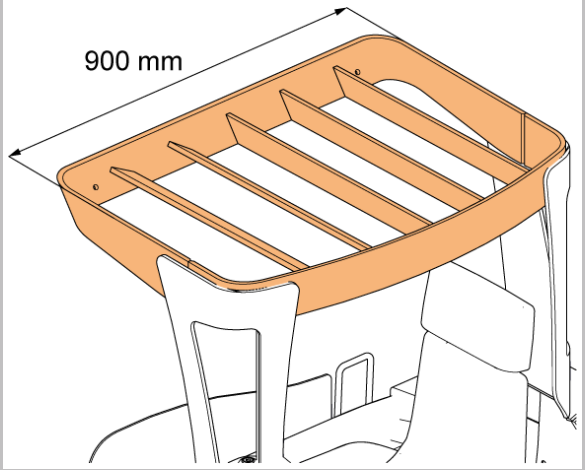
NOTE: Not for RTL120, RTL140 and RTN140.

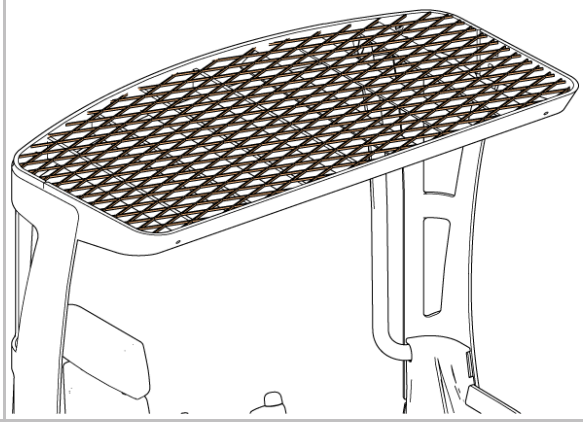
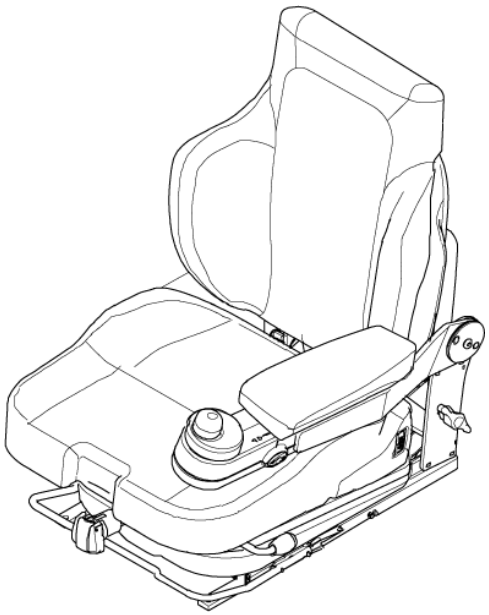


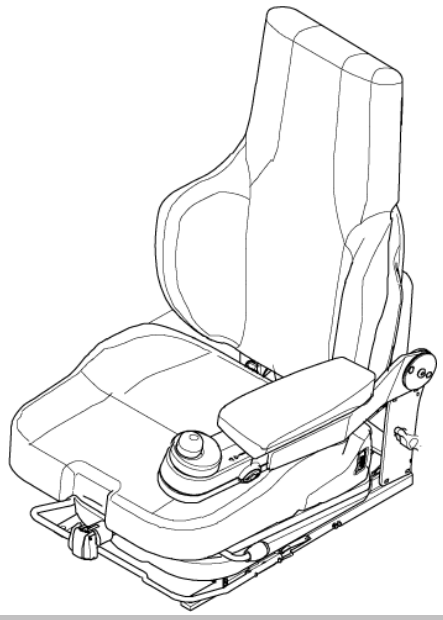
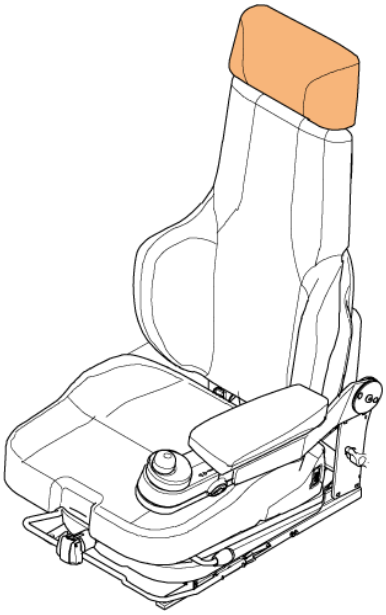
TAPERED OVERHEAD GUARD — TAP/OHG

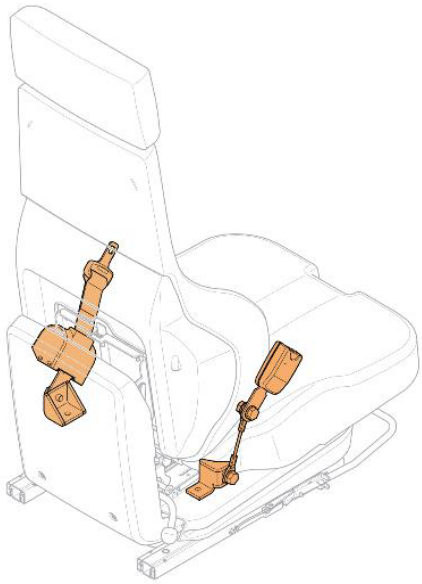
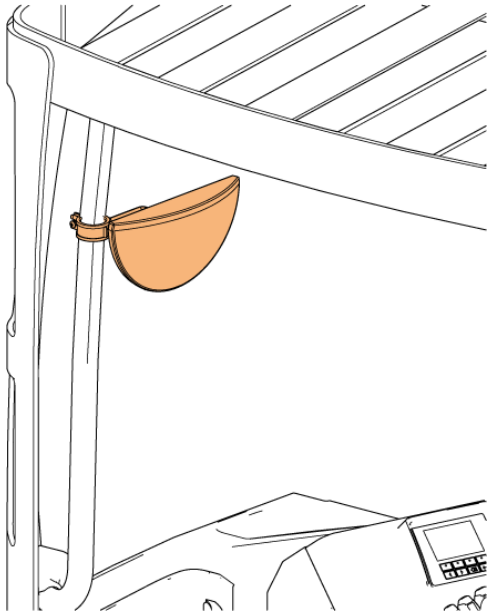
Reduces the width of the overhead guard to 900 mm at 1,590 mm height from the floor.

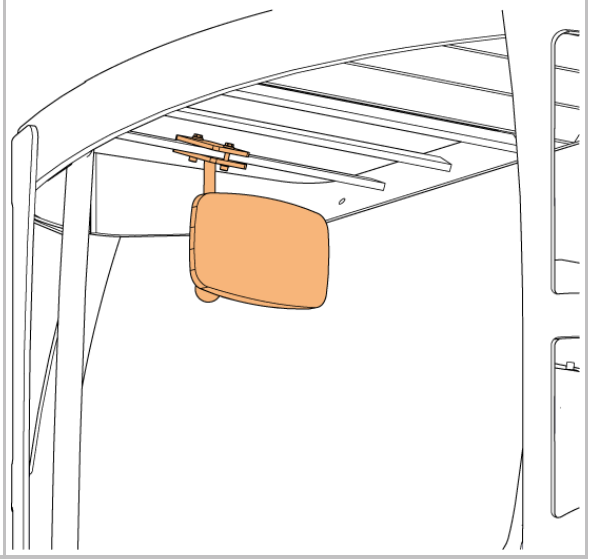
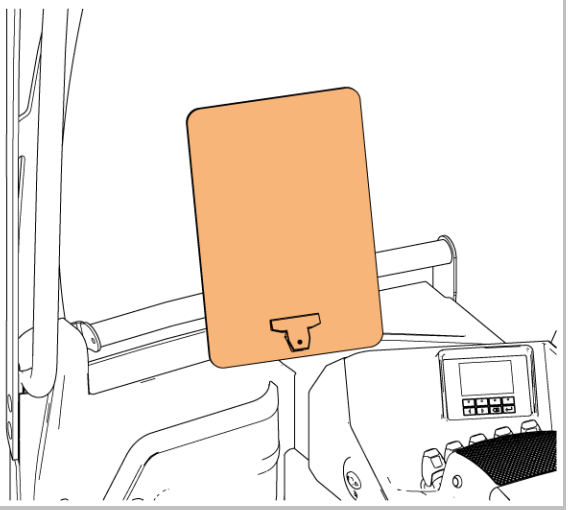
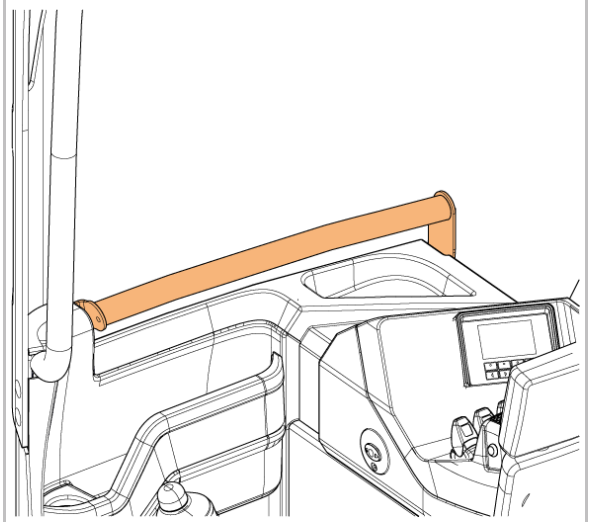
NOTE: For RTN140 only.

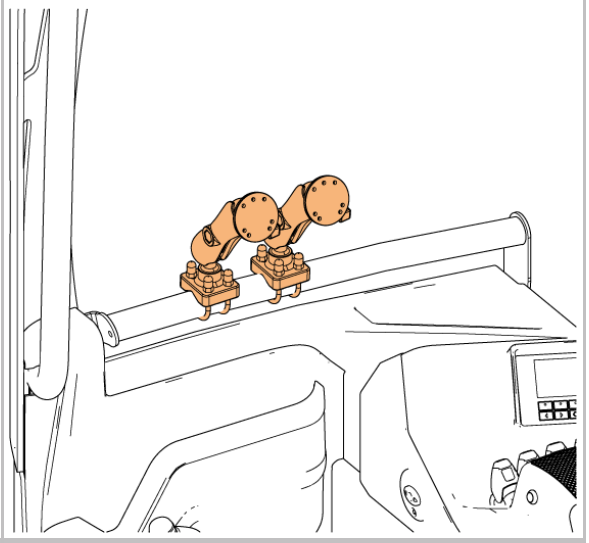


MESH METAL ON OVERHEAD GUARD	MESH/METAL
Eliminate the risk of goods falling between overhead guard bars.	
HEATED SEAT LOW BACK – FABRIC **HEATED SEAT LOW BACK – PVC**	**S/HEAT/CL** **S/HEAT/PL**
Heated seat with low backrest. Operated via on/off switch. Includes thermostat-regulated heating.	

HEATED SEAT FABRIC HEATED SEAT PVC HEATED SEAT HIGH BACK – FABRIC HEATED SEAT HIGH BACK – PVC	S/HEAT/C S/HEAT/P S/HEAT/CH S/HEAT/PH
Heated seat with high backrest. Operated via on/off switch. Includes thermostat-regulated heating. NOTE: On models RTL140 and RTN140 not in combination with Tapered overhead guard or Narrow heated cabin. NOTE: S/HEAT/CH and S/HEAT/PH are only for RTL120, RTL140, and RTN140.	
HEADREST FOR SEAT	**H/R**
Convex design for easy turning of the head. Adjustable in height and angle. NOTE: Only available on high backrest.	

SEAT BELT (ORANGE)	S/BELT
The seat belt option includes a safety function, which requires the seat belt to be fastened in order for the truck to move. NOTE: Safety sequence is not included i.e. it is not monitored whether the belt is fastened before sitting down on the seat.	
REAR VIEW MIRROR	**RVM**
Convex mirror. Mounted in the top part of the step-in handle. Included in the price if cold store cabin.	

REVERSE TRAVEL MIRROR	TVM
NOTE: Only for RTF200 and RTF250. Wide angle mirror mounted under the overhead guard. Provides a view over the load and the area behind the driver in lateral backwards driving. NOTE: Not in combination with Heated cabin or Reverse camera.	
WRITING DESK	**LBA4** **LBA4/CAB**
Clear A4-size plastic plate. Fully adjustable. Includes a RAM C holder (150 mm). Equipment bar is included in the price.	
EQUIPMENT BAR	**BAR**
Perfect visibility and ergonomics. ⦰ 35 mm, same as step-in handle.	

EQUIPMENT HOLDER, RAM SYSTEM SIZE C EQUIPMENT HOLDER, RAM SYSTEM SIZE C, 2 PCS	RAM/C RAM/C/2X
Length approximately 150 mm. Load capacity 1.8 kg. Attachment end fitted with a C-size 1,5” rubber ball connected to a 2.5" diameter round base with the universal AMPS hole pattern. Option RAM/C/2X contains 2 RAM/C holders. NOTE: Requires accessory rack.	
EQUIPMENT HOLDER, RAM SYSTEM SIZE D	**RAM/D**
Length approx 250 mm. Load capacity 4.5 kg. Stronger version than RAM C. Attachment end fitted with a D-size 2.25” rubber ball connected to a 2.5" diameter round base with the universal AMPS hole pattern. NOTE: Requires accessory rack.	

11 WHEEL OPTIONS

11.1 Option availability

●	Standard equipment
O	Available option
—	Not available

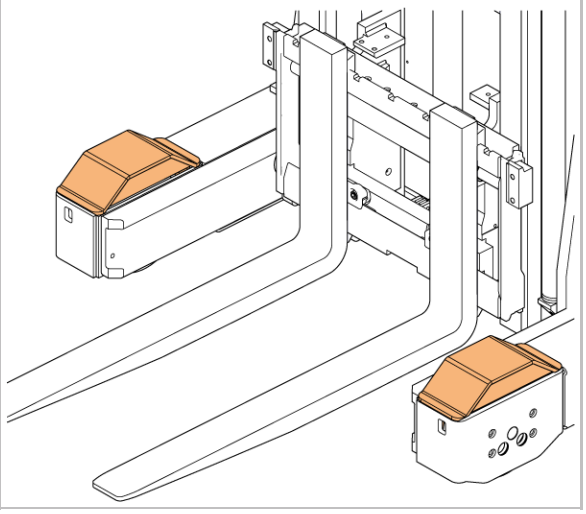
See Option descriptions for details.

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Vulkollan® traction wheel 93 Shore		VUL/DW/93	●	●	●	●	●	●	●	●	—	—	—	—
Vulkollan® traction wheel 95 Shore		VUL/DW/95	—	—	—	O	O	O	O	O	●	●	●	●
Vulkollan® traction wheel 95 Shore Low	1	VULDW/95/L	—	—	—	—	—	—	—	O	—	—	—	—
Tractothan® traction wheel 93 Shore	2	TRAC/DW	O	O	O	O	O	O	O	O	●	●	O	O
Load wheel Ø 220 mm			●	●	●	—	—	—	—	—	—	—	—	—
Load wheel Ø 230 mm		LW/230	—	—	—	●	O	O	—	O	—	—	—	—
Load wheel Ø 285 mm		LW/285	—	—	—	O	●	●	●	●	—	●	—	—
Load wheel Ø 260 / 320 mm			—	—	—	—	—	—	—	—	—	—	●	●
Load wheel brakes, incl. Ø 285 mm load wheel		LW/285/BR	—	—	—	—	O	O	—	O	●	O	—	—
Load wheel covers		COVER/LW	—	—	—	O	O	O	—	O	O	O	—	—

[1] Required for RTH200 when the lift height is equal or higher than 10,500 mm.

[2] Included in the MODCS option. Available for RTF250 and RTX200 only in combination with MODCS.

11.2 Option descriptions (wheel)

LOAD WHEEL COVERS	COVER/LW
The cover protects the wheel from damage. Open sides provide proper cooling, which contributes to low temperature and durability of wheels.	

12 ENVIRONMENT OPTIONS

12.1 Option availability

•	Standard equipment
O	Available option
—	Not available

See Option descriptions for details.

OPTION	NOTES	CODE	RTL120	RTL140	RTN140	RTM160	RTM200	RTH160	RTH160S	RTH200	RTH250	RTX200	RTF200	RTF250
Cold store design, 0°C to -30°C	1	MODCS	O	O	O	O	O	O	O	O	O	O	—	—
Canopy storage design	2	CANOPY	—	—	—	—	—	—	—	—	—	—	O	O
Antitstatic drag wire		EC/WIRE	O	O	O	O	O	O	O	O	O	O	O	O

[1] Not in combination with Li-ion battery, S3-2 Increased performance, Load weight indicator, fabric seat or Radio with CD/MP3.

[2] Not in combination with Ergologic or Radio with CD/MP3.

12.2 Option descriptions (environment)

COLD STORE DESIGN, 0°C TO -30°C	MODCS

Exposed axles in stainless steel.

Fabric driver’s seat replaced by PVC covered seat and armrest (not with cab option).

Cold store hydraulic fluid.

Additional grease nipples are added to reduce maintenance time and cost.

All electrical connections protected (Cryotox filling or seal).

Heated and insulated controller and display.

Additional rust protection on exposed details and components.

Rust protection (Tectyl) on the following surfaces:
- Unpainted surfaces and black screws
- Load wheel and drive wheel hubs
- Bolts securing drive motor and gearbox
- Bolts securing mast and chassis.

Tractothan® 93° shore or Super grip 94° shore drive wheel for optimum traction and durability in mixed conditions.

Includes seat–low backrest PVC SEAT/PL, or seat–high backrest PVC SEAT/PH according to selection.

Fingertip controls included as standard.

NOTE: Keep the truck in the cold store. When changing batteries, bring the battery to the truck. If you have to leave the cold store, stay outside long enough to allow the truck to dry completely. If you have to drive in and out of the cold store, ensure you make the stays inside as short as possible and the stays outside as long as possible. The temperature of the truck should never go below 0°C.

Or do it the other way around, spend as much time as possible inside and as little time as possible outside. The idea here is that the temperature of the truck never goes above 0°C.

NOTE: Not in combination with Li-ion battery, S3-2 Increased performance, Load weight indicator, fabric seat or Radio with CD/MP3.

NOTE: Not available for RTF200 and RTF250.

CANOPY STORAGE DESIGN	CANOPY

Canopy storage design (+1°C constant use, -30°C temporary use without shut down. Refer to Operators manual.)

NOTE: Available only on RTF200-250.

Designed to allow the truck to be used in chilled and/or wet and damp areas covered with a roof.

Heated and insulated controller, heater plate on display, designed for cold environments.

Kryotox® protection of exposed connectors.

Drive wheel: Vulkollan® 95 Shore is standard but for use in slippery environments Tractothan® 93° shore is recommended.

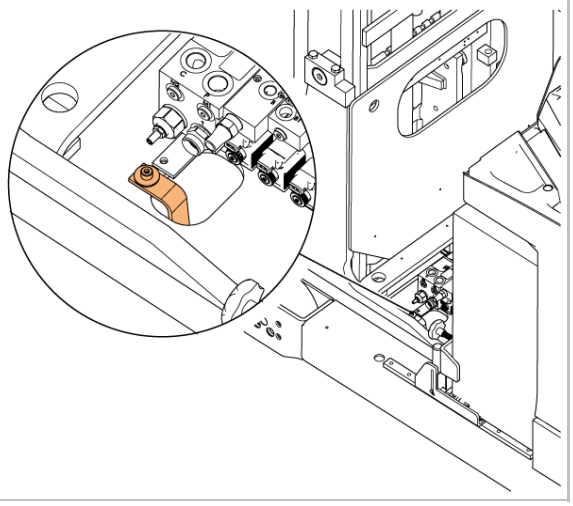
Improved rust protection on exposed components and surfaces:

Unpainted surfaces, exposed screws, load wheel and drive wheel hubs, bolts securing drive motor and gearbox, bolts securing mast and chassis.

Option Fingertip controls replaces Ergologic in Canopy storage design.

NOTE: Ergologic not available in combination with Canopy storage design.

NOTE: Radio with CD/MP3 is not available with Canopy storage design.

ANTISTATIC DRAG WIRE	EC/WIRE
The Antistatic Drag Wire option prevents in most of the cases an electrostatic charge on the reach truck.	

RTL120/140
RTN140
RTM160/200
RTH160(S)/200/250
RTX200
RTF200/250

info@tcm.eu | tcm.eu