RX 60 Technical data

Electric forklift trucks

RX 60-25

RX 60-25/600

RX 60-30

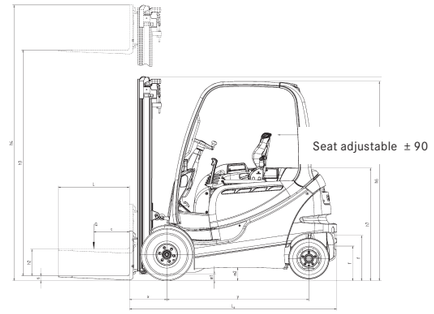
RX 60-30/600

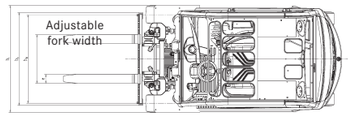
RX 60-35

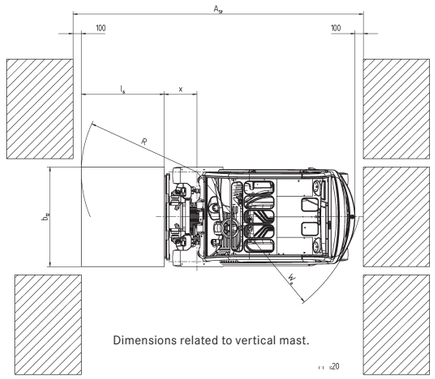
first in intralogistics

Characteristics	1.1	Manufacturer				STILL	STILL	STILL	STILL	STILL	STILL	STILL	STILL
	1.2	Manufacturer's model designation				RX 60-25	RX 60-25/600	RX 60-25 L	RX 60-25L/600	RX 60-30	RX 60-30L	RX 60-30L/600	RX 60-35
	1.3	Truck type				Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric
	1.4	Operation				Rider seated	Rider seated	Rider seated	Rider seated	Rider seated	Rider seated	Rider seated	Rider seated
	1.5	Capacity	Q		kg	2500	2500	2500	2500	3000	3000	3000	3500
	1.6	Load centre	c		mm	500	600	500	600	500	500	600	500
	1.8	Load distance	x		mm	420	425	420	425	440	440	440	440
	1.9	Wheel base	y		mm	1595	1595	1740	1740	1650	1740	1740	1770
Weights	2.1	Truck weight			kg	4651	4907	4977	5012	5152	5097	5458	5539
	2.2	Axle load front, with load			kg	6335	6563	6390	6597	7290	7286	7571	8107
	2.2.1	Axle load rear, with load			kg	816	844	1086	915	861	811	887	932
	2.3	Axle load front, without load			kg	2393	2456	2568	2624	2581	2665	2778	2749
	2.3.1	Axle load rear, without load			kg	2258	2451	2408	2388	2570	2436	2680	2791
Wheels | chassis	3.1	Tyres				SE	SE	SE	SE	SE	SE	SE	SE
	3.2	Tyres size front			mm	225/75-10	225/75-10	225/75-10	225/75-10	250/60-12	250/60-12	315/45-12	315/45-12
	3.3	Tyres size rear			mm	180/70-8	180/70-8	180/70-8	180/70-8	180/70-8	180/70-8	180/70-8	180/70-8
	3.5	Number of wheels front (x = driven)				2x	2x	2x	2x	2x	2x	2x	2x
	3.5.1	Number of wheels rear (x = driven)				2	2	2	2	2	2	2	2
	3.6	Track width front	b_{10}		mm	992	992	992	992	950	950	1002	1002
	3.7	Track width rear	b_{11}		mm	900	900	900	900	900	900	900	900
Dimensions	4.1	Tilt mast/fork carriage, forward			°	3	3	3	3	3	3	3	3
	4.1.1	Tilt mast/fork carriage, back			°	9	9	9	9	9	9	9	9
	4.2	Closed mast height	h_1		mm	2175	2175	2175	2175	2175	2175	2175	2175
	4.3	Free lift	h_2		mm	160	160	160	160	160	160	160	160
	4.4	Hub	h_3		mm	3020	3020	3020	3020	3020	3020	2820	2820
	4.5	Extended mast height	h_4		mm	3650	3650	3800	3800	3800	3800	3700	3700
	4.7	Height over overhead guard (cabin)	h_6		mm	2210	2210	2209	2209	2212	2212	2212	2211
	4.8	Seat/Platform height	h_7		mm	1139	1139	1138	1138	1141	1141	1141	1140
	4.12	Coupling height	h_{10}		mm	485/365	485/365	484/364	484/364	487/367	486/366	486/366	485/365
	4.19	Overall length	l_1		mm	3328	3533	3473	3678	3403	3493	3693	3523
	4.20	Length including fork backs	l_2		mm	2328	2333	2473	2478	2403	2493	2493	2523
	4.21	Overall width	b_1		mm	1199	1199	1199	1199	1198	1198	1300	1300
	4.22	Fork thickness	s		mm	40	45	40	45	50	50	50	50
	4.22.1	Fork width	e		mm	100	100	100	100	100	100	100	100
	4.22.2	Fork length	l		mm	1000	1200	1000	1200	1000	1000	1200	1000
	4.23	Fork carriage ISO 2328, class/form A, B				ISO II/A	ISO II/A	ISO II/A	ISO II/A	ISO III/A	ISO III/A	ISO III/A	ISO III/A
	4.24	Fork carriage width	b_3		mm	1040	1040	1040	1040	1100	1100	1100	1100
	4.31	Ground clearance beneath mast, with load	m_1		mm	125	125	125	125	125	125	125	125
	4.32	Ground clearance centre wheel base	m_2		mm	125	125	124	124	127	127	127	126
	4.33	Aisle width for pallets 1000 x 1200 wide	A_{st}		mm	3654	3658*	3805	3810*	3735	3825	3825*	3854
	4.34	Aisle width for pallets 800 x 1200 long	A_{st}		mm	3852	3857	4005	4010	3935	4025	4025	4054
	4.35	Turning radius	W_a		mm	2032	2032	2185	2185	2095	2185	2185	2214
	4.36	Inner turning radius	b_{13}		mm	539	539	590	590	570	590	590	594
Performance	5.1	Speed with load			km/h	19	19	19	19	19	19	19	19
	5.1.1	Speed without load			km/h	20	20	20	20	20	20	20	20
	5.2	Lift speed with load			m/s	0.53	0.52	0.53	0.52	0.43	0.43	0.42	0.37
	5.2.1	Lift speed without load			m/s	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
	5.3	Lowering speed with load			m/s	0.54	0.54	0.54	0.54	0.51	0.51	0.51	0.51
	5.3.1	Lowering speed without load			m/s	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	5.5	Drawbar pull with load			N	8000	7950	7940	7900	7680	7690	7550	7410
	5.5.1	Drawbar pull without load			N	8110	8060	8050	8050	8040	8060	7960	7860
	5.6	Max. drawbar pull with load			N	17440	17420	17390	17420	17050	17070	17010	16710
	5.6.1	Max. drawbar pull without load			N	17220	17090	17210	17130	17240	17270	17110	16970
	5.7	Gradeability with load			%	21.3	20.4	20.3	20.0	18.1	18.3	17.2	15.9
	5.7.1	Gradeability without load			%	29.5	29.1	30.2	30.0	29.0	30.1	28.0	27.0
	5.8	Max. gradeability with load			%	25.5	24.0	24.2	24.0	21.7	21.9	20.9	19.1
	5.8.1	Max. gradeability without load			%	29.7	28.3	30.2	30.0	29.0	30.6	29.3	29.2
	5.9	Acceleration time with load			s	4.5	4.6	4.6	4.6	4.7	4.8	4.9	4.9
	5.9.1	Acceleration time without load			s	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.3
	5.10	Brake				electr./mech.	electr./mech.	electr./mech.	electr./mech.	electr./mech.	electr./mech.	electr./mech.	electr./mech.
E-Motor	6.1	Drive motor capacity 60 min (short time operation)			kW	15	15	15	15	15	15	15	15
	6.2	Lift motor capacity at 20% (intermittent operation)			kW	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
	6.3	Battery to DIN 43531/35/36 A, B, C, no				DIN 43536 A	DIN 43536 A	DIN 43536 A	DIN 43536 A	DIN 43536 A	DIN 43536 A	DIN 43536 A	DIN 43536 A
	6.4	Battery voltage			U/V	80	80	80	80	80	80	80	80
	6.4.1	Battery capacity K_5			Ah	560 (-620)	560 (-620)	700 (-775)	700 (-775)	560 (-620)	700 (-775)	700 (-775)	700 (-775)
	6.5	Battery weight			kg	1558	1558	1863	1863	1558	1863	1863	1863
	6.6	Energy consumption 60 VDI work cycles/hour			kWh/h	6.7	6.9	7.2	7.2	7.5	7.7	8.0	8.6
Miscellaneous	8.1	Drive control				-		-		-	-		-
	8.2	Operating pressure for attachments			bar	250	250	250	250	250	250	250	250
	8.3	Oil flow for attachments			l/min	30	30	30	30	30	30	30	30
	8.4	Noise level at driver's ear			dB (A)	-	-	-	-	-	-	-	-
	8.5	Trailer coupling, type DIN				Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin

* Extending forks not considered.

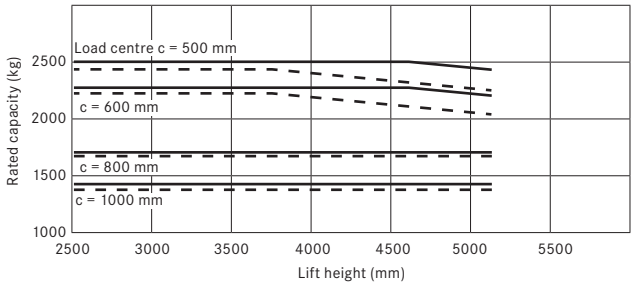




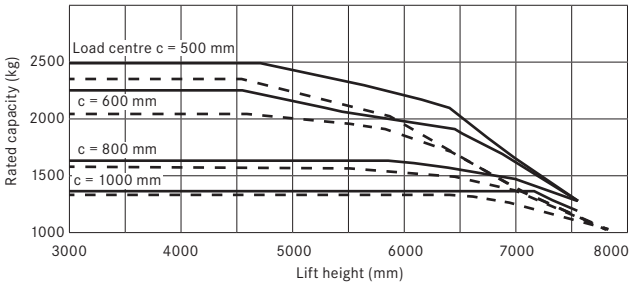


				Telescopic mast		HiLo mast		Triplex mast	
RX 60-25	Rated lift	h_3	mm	2320-5120		2500-4800		3580-5080	5230-7780
	Closed height	h_1	mm	1825-3225		1825-2975		1825-2325	2375-3225
	Free lift 4-roller carriage	h_2	mm	160		1265-2415		1265-1765	1815-2665
	Free lift 6-roller carriage	h_2	mm	160		1115-2265		1115-1615	1665-2515
	Overall height 4-roller carriage	h_4	mm	2950-5750		3090-5390		4185-5685	5835-8385
	Overall height 6-roller carriage	h_4	mm	3100-5900		3240-5540		4335-5835	5985-8535
	Forward tilt	α	°	3				3	
	Backward tilt	β	°	9 (with front screen 7)				9 (with front screen 7)	
	Overall length RX 60-25	L_2	mm	2328				2353	
	Overall length RX 60-25L	L_2	mm	2473				2498	
	Load distance	x	mm	420				445	
	Working aisle width RX 60-25	A_{st}	mm	(1000 x 1200) 3654 // (1200 x 800) 3852				(1000 x 1200) 3678 // (1200 x 800) 3877	
	Working aisle width RX 60-25L	A_{st}	mm	(1000 x 1200) 3805 // (1200 x 800) 4005				(1000 x 1200) 3830 // (1200 x 800) 4030	
	Tyres	v/h		225/75-10 // 180/70-8				225/75-10 // 180/70-8	
	Track	v/h	mm	992//900 (closed height over 2725: 1096 // 900)				992 // 900	1096 // 900
	Overall width	B	mm	1199 (closed height over 2725: 1303)				1200	1303
	Fork location centre-centre		mm	216 / 368 / 445 / 521 / 673 / (820) / (826) / (970) / (1050)					
RX 60-25/600	Rated lift	h_3	mm	2320-4120	4220-5120	2430-4230	4330-4730	3510-4860	5010-7710
	Closed height	h_1	mm	1825-2725	2775-3225	1825-2725	2775-3225	1825-2275	2325-3225
	Free lift 6-roller carriage	h_2	mm	160		1040-1940	1990-2190	1040-1490	1540-2440
	Overall height 6-roller carriage	h_4	mm	3100-4900	5000-5900	3245-5045	5145-5545	4340-5690	5840-8540
	Tilt forward	α	°	3				3	
	Tilt backward	β	°	9 (with front screen 7)				9 (with front screen 7)	
	Overall length RX 60-25/600	L_2	mm	2333				2358	
	Overall length RX 60-25L/600	L_2	mm	2478				2503	
	Load distance	x	mm	425				450	
	Working aisle width RX 60-25/600	A_{st}	mm	(1000 x 1200) 3658* // (1200 x 800) 3857				(1000 x 1200) 3683* // (1200 x 800) 3882	
	Working aisle width RX 60-25L/600	A_{st}	mm	(1000 x 1200) 3810* // (1200 x 800) 4010				(1000 x 1200) 3835* // (1200 x 800) 4035	
	Tyres	v/h		225/75-10 // 180/70-8	250/60-12 // 180/70-8	225/75-10 // 180/70-8	250/60-12 // 180/70-8	225/75-10 // 180/70-8	250/60-12 // 180/70-8
	Track	v/h	mm	992 // 900	1050 // 900	992 // 900	1050 // 900	992 // 900	1050 // 900
	Overall width			1200	1300	1200	1300	1200	1300
	Fork distance centre-centre		mm	216 / 368 / 445 / 521 / 673 / (820) / (826) / (970) / (1050)					
RX 60-30	Rated lift	h_3	mm	2320-5120		2390-4690		3430-7630	
	Closed height	h_1	mm	1825-3225		1825-2975		1825-3225	
	Free lift 4-roller carriage	h_2	mm	160		1190-2340		1190-2590	
	Free lift 6-roller carriage	h_2	mm	160		1040-2190		1040-2440	
	Overall height 6-roller carriage	h_4	mm	3100-5900		3205-5505		4260-8460	
	Tilt forward	α	°	3				3	
	Tilt backward	β	°	9 (with front screen 7)				9 (with front screen 7)	
	Overall length RX 60-30	L_2	mm	2403				2428	
	Overall length RX 60-30L	L_2	mm	2493				2518	
	Load distance	x	mm	440				465	
	Working aisle width RX 60-30	A_{st}	mm	(1000 x 1200) 3735 // (1200 x 800) 3935				(1000 x 1200) 3760 // (1200 x 800) 3960	
	Working aisle width RX 60-30L	A_{st}	mm	(1000 x 1200) 3825 // (1200 x 800) 4025				(1000 x 1200) 3850 // (1200 x 800) 4050	
	Tyres	v/h		250/60-12 // 180/70-8				250/60-12 // 180/70-8	
	Track	v/h	mm	992 // 900 (closed height over 2725: 1096 // 900)				950 // 900	closed height over 2325: 1050 // 900
	Overall width	B	mm	1199 (closed height over 2725: 1303)				1200	1298
	Fork distance centre-centre		mm	216 / 368 / 445 / 521 / 673 / 796 / 876 / (978) / (1080) / (1181)					
RX 60-30/600	Rated lift	h_3	mm	2120-4920		2190-4290		3130-7330	
	Closed height	h_1	mm	1825-3225		1825-2875		1825-3225	
	Free lift 6-roller carriage	h_2	mm	160		940-1990		940-2340	
	Overall height 6-roller carriage	h_4	mm	3000-5800		3105-5205		4060-8260	
	Tilt forward	α	°	3				3	
	Tilt backward	β	°	9 (with front screen 7)				9 (with front screen 7)	
	Overall length RX 60-30/600	L_2	mm	2493				2518	
	Load distance	x	mm	440				465	
	Working aisle width RX 60-30/600	A_{st}	mm	(1000 x 1200) 3825* // (1200 x 800) 4025				(1000 x 1200) 3850* // (1200 x 800) 4050	
	Tyres	v/h		315/45-12 // 180/70-8 (up to 16 km/h 250/60-12 // 180/70-8 also available)				315/45-12 // 180/70-8 (up to 16 km/h 250/60-12 // 180/70-8 also available)	
	Track	v/h	mm	1002 // 900 (950 // 900; closed height over 2875: 1050 // 900)				1100 // 900 (1050 // 900)	
	Overall width	B	mm	1300 (1200; closed height over 2875: 1300)				1400 (1300)	
	Fork distance centre-centre		mm	216 / 368 / 445 / 521 / 673 / 796 / 876 / (978) / (1080) / (1181)					
RX 60-35	Rated lift	h_3	mm	2120-4920		2190-4290		3130-7330	
	Closed height	h_1	mm	1825-3225		1825-2875		1825-3225	
	Free lift 4-roller carriage	h_2	mm	-		1090-2140		1090-2490	
	Free lift 6-roller carriage	h_2	mm	160		940-1990		940-2340	
	Overall height 4-roller carriage	h_4	mm	-		2955-5055		3910-8110	
	Overall height 6-roller carriage	h_4	mm	3000-5800		3105-5205		4060-8260	
	Tilt forward	α	°	3				3	
	Tilt backward	β	°	9 (with front screen 7)				9 (with front screen 7)	
	Overall length RX 60-35	L_2	mm	2523				2548	
	Load distance	x	mm	440				465	
	Working aisle width RX 60-35	A_{st}	mm	(1000 x 1200) 3854 // (1200 x 800) 4054				(1000 x 1200) 3879 // (1200 x 800) 4079	
	Tyres	v/h		315/45-12 // 180/70-8				315/45-12 // 180/70-8	
	Track	v/h	mm	1002 // 900				1100 // 900	
	Overall width	B	mm	1300				1400	
	Fork distance centre-centre		mm	216 / 368 / 445 / 521 / 673 / 796 / 876 / (978) / (1080) / (1181)					

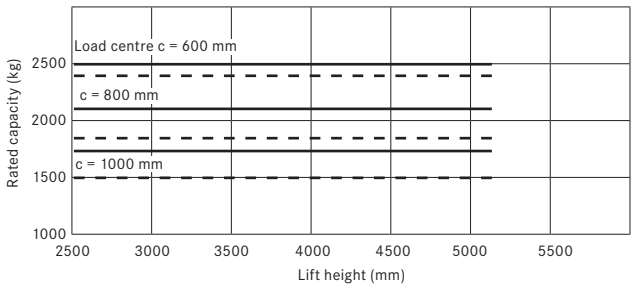
Rated capacities RX 60-25L Tele-/HiLo mast



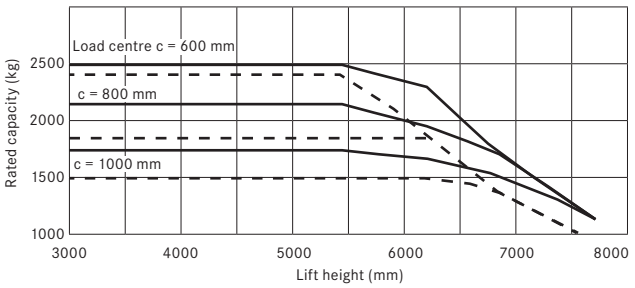
Rated capacities RX 60-25 with triplex mast



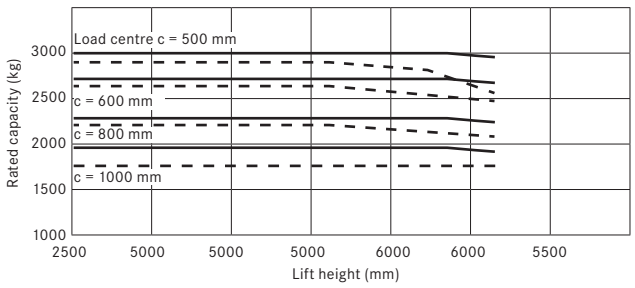
Rated capacities RX 60-25/600 Tele-HiLo mast



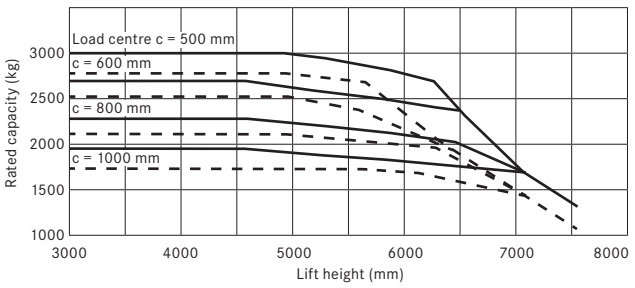
Rated capacities RX 60-25/600 with triplex mast



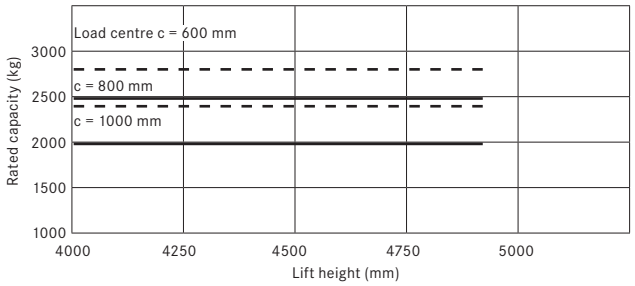
Rated capacities RX 60-30L Tele-HiLo mast



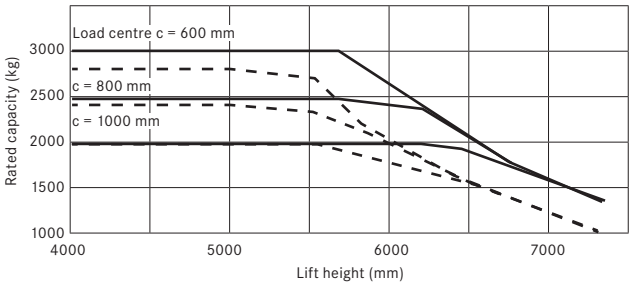
Rated capacities RX 60-30 with triplex mast



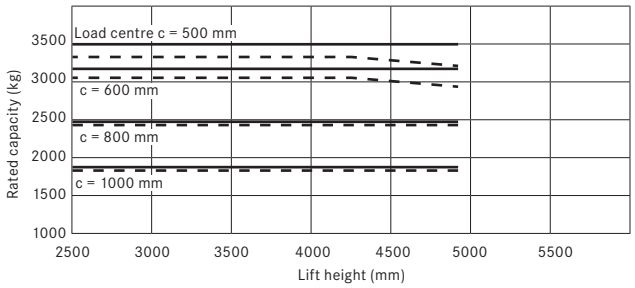
Rated capacities RX 60-30/600 Tele-HiLo mast



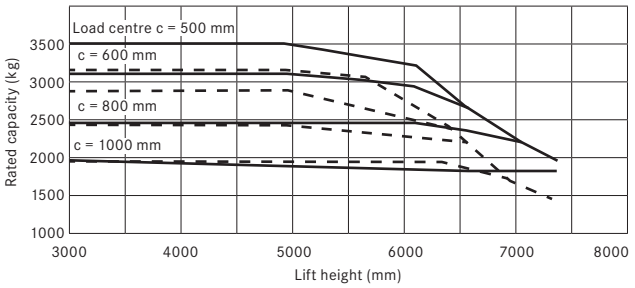
Rated capacities RX 60-30/600 with triplex mast



Rated capacities RX 60-35 Tele-HiLo mast



Rated capacities RX 60-35 with triplex mast

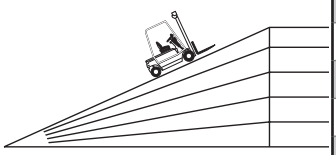


without side shift with attached side shift

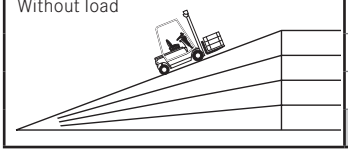
Gradients, maximum distance that can be driven in 60 minutes.

Example: An RX 60-25 with a load of 2 500 kg and a gradient of 13% can drive a distance of 600 m 10 times per hour.

With load



Without load



	RX 60-25	RX 60-25L	RX 60-30	RX 60-30L	RX 60-35	RX 60-25/600	RX 60-25L/600	RX 60-30/600
25%	3770	3320	3020	3020	2120	3380	3320	2480
20%	5340	5110	5030	5030	4090	5120	5110	4430
15%	6480	6180	5990	5990	5810	6180	6180	5920
10%	8280	7900	7710	7890	7260	7910	7900	7450
5%	12400	11480	11690	11680	10880	11900	11480	10980
20%	2670	1790	1400	1400	-	2160	1790	1120
15%	4590	3740	2940	2940	2090	4180	3740	2560
10%	6000	5790	5450	5450	5040	5860	5790	5270
5%	8950	8600	8200	8200	7570	8640	8600	7880

(Dry rough concrete surface = Friction value 0.8)
(Battery: Standard battery as indicated in data sheet)

Drive.

The energy efficient and noise optimised three-phase drive unit on the RX 60 acts on the front wheels. High traction power and driving dynamics, even on uneven ground or when climbing ramps, ensure a high turnover of goods. The BOOST function of the RX 60 is a particularly useful characteristic that provides the maximum torque of the motor if required, e. g. to pass over transitions.
The maintenance-free, efficiency-optimised three-phase drive guarantees a long battery operating life. Thanks to complete IP-54 enclosing, the whole drive is protected against ingress of damaging dust and water spray, so that even applications in the worst conditions are no problem.
In addition to this, the regenerative braking of the motor feeds up to 15% of the energy back into the battery when the drive pedal is released. This increases the useful time of a battery by up to 1.5 hours. For many applications this means, that interim charging or changing of the battery is not needed. The STILL controller ensures sensitive driving with optimal utilisation of energy. It also enables the truck to be held on ramps without using the maintenance-free multi-disc brakes, for greater safety and driving comfort. The power electronics are protected within the counterweight. The heat from the controller is dissipated into the counterweight over a large contact area. This arrangement provides very good cooling without additional fans or filters and makes the work pleasantly quiet and reliable.

Blue-Q energy optimisation.

- Activate Blue-Q energy saving mode at the push of a button.
- Energy saving due to intelligent optimisation of the drive characteristics without impairing the work process.
- Intelligently switches off electrical consumers
- A saving in energy consumption of up to 20% depending on the application and the truck's equipment.

Electrical system.

The electrical system on the RX 60 works digitally. The two separate CAN bus systems allow operation without repercussions on the drive train. This provides breakdown security. At the same time the robust controller with its two processors provides mutual monitoring for the greatest possible safety. Simple retro-fitting of other electrical units is possible through pre-prepared connections.

Mast.

Depending on the application, the Telescopic, HiLo or Triplex options offer the following:

- Telescopic: an inexpensive mast design suitable for many applications, with full visibility through the mast
- HiLo: supplements the telescopic mast with an additional central full free lift cylinder to allow high stacking under low ceilings - e. g. in containers or lorries.
- Triplex: for use where there are low doorways but high lift heights, for utilisation of warehouses right up to the roof. The fork carriages are designed as frame type constructions for best vision.

Hydraulic system.

The speed of the pump motor is demand controlled and precisely steered by the dynamic servo-motor assistant. This design ensures that movements of the valve controls or the steering wheel are precisely carried out and optimises power consumption for longer battery usage. Sensitive handling of the hydraulics allows exact placement of loads and increases work safety. And, the hydraulic system itself is optimised for low energy consumption:

- highly efficient hydraulic pump.

The hydraulic pump was especially designed for this truck and emits little noise, thanks to its internal toothed design.

- Pressure make-up valves replaced with load holding valves.

The priority valve for the steering is directly connected to the pump so that hydraulic interfaces and hoses are not required. This guarantees a safer, cleaner operation.

Driver's compartment.

The driver's work place in the RX 60:

- The large foot space with its inclined floor plate and anti-slip covering provides quick convenient entry and exit and also a relaxed leg position when driving.
- The adjustable steering column with its small steering wheel provides an ergonomic match to the driver and reduces steering movements.
- The automotive style foot pedal arrangement can, if wished, be replaced by a double pedal arrangement, to adapt the RX 60 to whatever the driver is familiar with, for a maximum turnover of goods.
- The drive direction switch on the valve lever (lifting and lowering) aids untiring concentrated work, even during long shifts, because it allows convenient changing of the drive direction without changing grip.
- Thanks to the heated fully graphic display, the time, maintenance intervals and battery state, for example, are clearly displayed even when changing from cold to warm areas of use. The whole RX 60 is subjected to constant onboard diagnosis.
  With 5 selectable drive programs the driver can match the driving characteristics of the RX 60 to the application situation or to what is personally preferred at any time. Each program can be precisely adapted to the application profile in order to achieve optimum economy and load turnover performance.
- The driver's compartment of the RX 60 provides a lot of head room even for tall drivers, and also good all round vision, thanks to the large viewing panels in the roof, very slim overhead guard legs and the high seating position.

Safety.

Electrical braking when the drive pedal is released, and the fully automatic hold-on-ramp feature which works without using the brakes, plus the mechanical parking and service brake guarantees safe use at any time. Battery changes on the RX 60 are carried out using a hand pallet truck, low lift pallet truck, forklift truck or hoist. Along with the considerable saving in time compared with conventional craning of the battery, especially with cab variants, this concept minimizes the risk of crushing and damage of any sort that could occur with a heavy swinging battery.

Service.

The maintenance interval of the RX 60 is 1000 hours or 12 months. These intervals save time and maintenance costs especially in one shift operation, where the 1000 hours roughly correspond to the number of annual operating hours and thus the maintenance and the annual examination can be carried out at the same time.
Quick diagnosis by laptop computer and good accessibility of all maintenance components in conjunction with the quick availability of all necessary parts guarantee short service times and a high level of availability for the RX 60.

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