

RX 20 Technical Data.

Electric forklift trucks

RX 20-15

RX 20-16

RX 20-16P

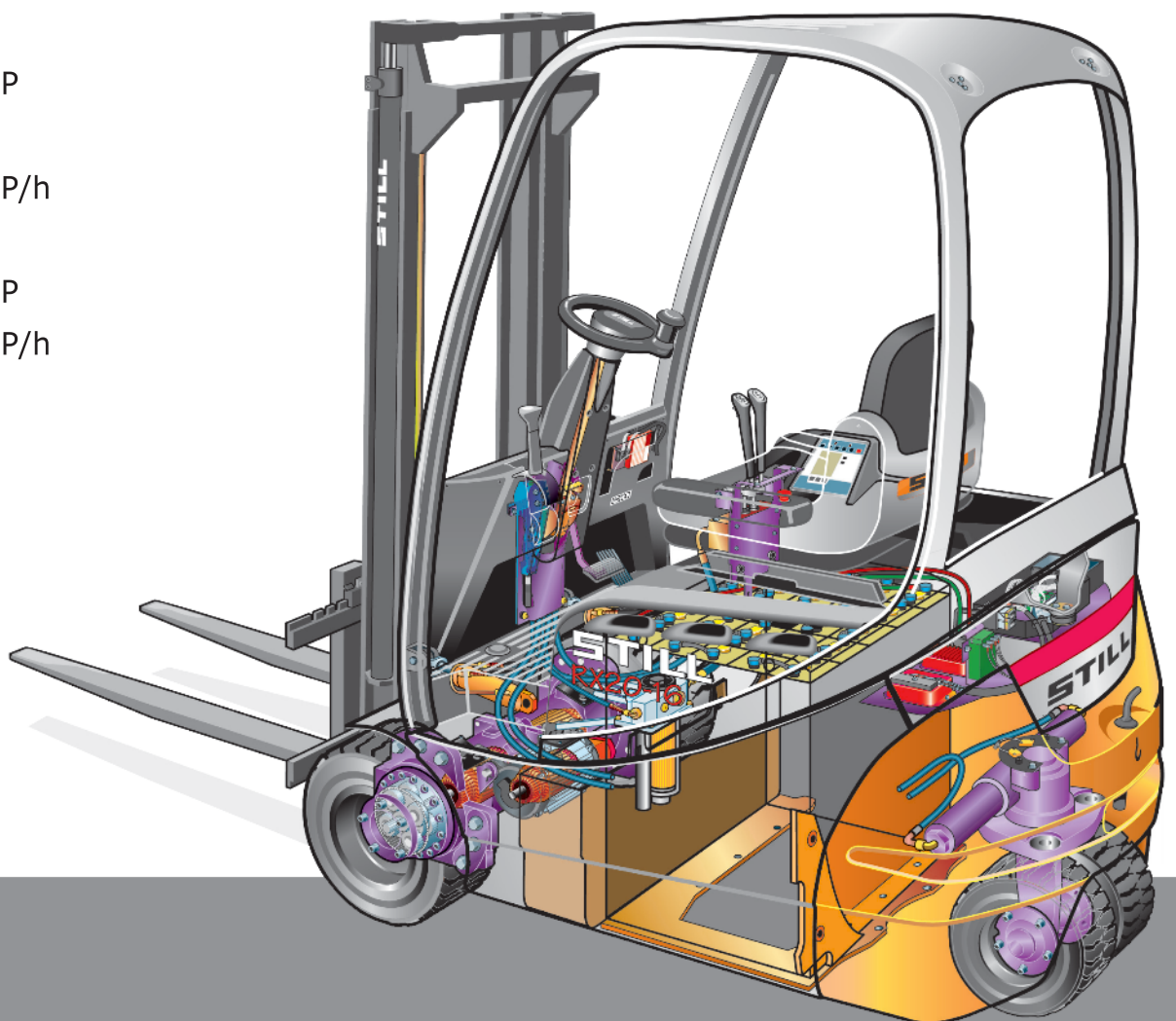
RX 20-18

RX 20-18P/h

RX 20-20

RX 20-20P

RX 20-20P/h

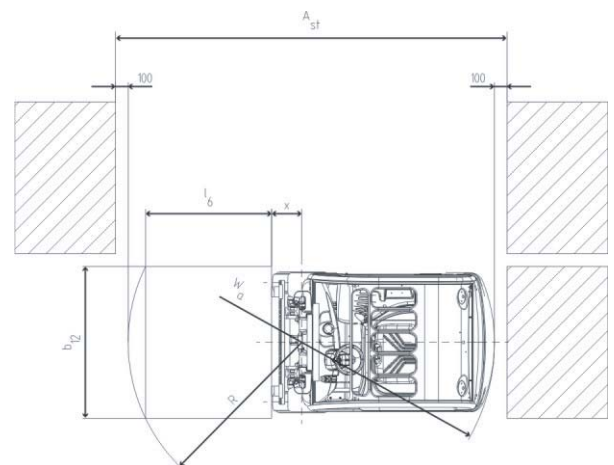
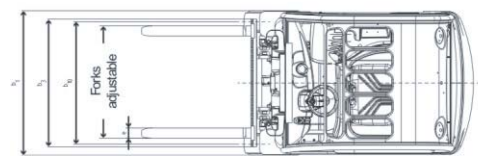
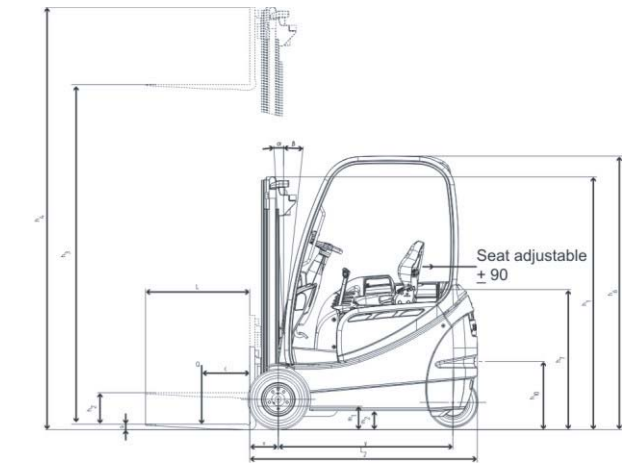


RX 20 Technical Data.

This specification sheet to VDI Guideline 2198 only gives the technical figures for the standard truck.
Different tyres, other masts, additional equipment etc. could give different figures.

Characteristics	1.1	Manufacturer			STILL	STILL	STILL	STILL		
	1.2	Manufacturer's model designation			RX 20-15	RX 20-16	RX 20-16P	RX 20-18		
	1.3	Power supply – electric, diesel, petrol, gas, mains electric			Electric	Electric	Electric	Electric		
	1.4	Type of control – hand, pedestrian, stand-on, rider seated			Rider seated	Rider seated	Rider seated	Rider seated		
	1.5	Carrying capacity/load	Q	kg	1500	1600	1600	1800		
	1.6	Load centre	c	mm	500	500	500	500		
	1.8	Load distance	x	mm	350	355	355	355		
	1.9	Wheelbase	y	mm	1341	1341	1410	1441		
	Weights	2.1	Weight			kg	2824	2884	2916	3044
2.2		Axle loadings laden front			kg	3743	3933	3915	4288	
2.2.1		Axle loadings laden rear			kg	513	550	602	556	
2.3		Axle loadings unladen front			kg	1292	1314	1345	1421	
2.3.1		Axle loadings unladen rear			kg	1464	1570	1571	1623	
Wheels Chassis		3.1	Tyres – rubber (V), superelastic (SE), pneumatic (L), polyurethane (PE)				SE	SE	SE	SE
	3.2	Tyre size – front				18 x 7-8	18 x 7-8	18 x 7-8	200/50-10	
	3.3	Tyre size – rear				15 x 4 1/2-8	15 x 4 1/2-8	16 x 6-8	15 x 4 1/2-8	
	3.5	Wheels – number front (x = drive wheel)				2x	2x	2x	2x	
	3.5.1	Wheels – number rear (x = drive wheel)				2	2	2	2	
	3.6	Track width – front	b ₁₀	mm	932	932	932	942		
	3.7	Track width – rear	b ₁₁	mm	168	168	865	168		
Basic dimensions	4.1	Tilt angle, mast/fork carriage forwards			Grad	3	3	3	3	
	4.1.1	Tilt angle, mast/fork carriage backwards			Grad	8	8	8	8	
	4.2	Closed height			h ₁	mm	2160	2160	2160	2160
	4.3	Free lift			h ₂	mm	150	150	150	150
	4.4	Lift height			h ₃	mm	3230	3230	3230	3230
	4.5	Height, mast raised			h ₄	mm	3805	3805	3805	3805
	4.7	Height to top of overhead guard (cabin)			h ₆	mm	2082	2082	2082	2082
	4.8	Seat height			h ₇	mm	1015	1015	1015	1015
	4.12	Coupling height			h ₁₀	mm	490	490	460/350	490
	4.19	Overall length			l ₁	mm	2683	2683	2861	2783
	4.20	Length to front face of forks			l ₂	mm	1883	1883	2061	1983
	4.21	Overall width			b ₁	mm	1099	1099	1099	1138
	4.22	Fork thickness			s	mm	35	40	40	40
	4.22.1	Fork width			e	mm	80	80	80	80
	4.22.2	Fork length			l	mm	800	800	800	800
	4.23	Fork carriage to ISO 2328 – class/form A or B					ISO II/A	ISO II/A	ISO II/A	ISO II/A
	4.24	Fork carriage width			b ₃	mm	980	980	980	980
	4.31	Ground clearance beneath mast, laden			m ₁	mm	90	90	90	90
	4.32	Ground clearance at centre of wheelbase			m ₂	mm	123	123	123	123
	4.33	Aisle width for pallets 1000 x 1200 wide			A _{st}	mm	3204	3209	3408	3309
4.34	Aisle width for pallets 800 x 1200 long			A _{st}	mm	3328	3333	3607	3433	
4.35	Outer turning radius			W ₆	mm	1523	1528	1852	1628	
4.36	Inner turning radius			b ₁₃	mm	–	–	533	–	
Performance data	5.1	Speed laden			km/h	16	16	16	16	
	5.1.1	Speed unladen			km/h	16	16	16	16	
	5.2	Lift speed laden			m/s	0.43	0.43	0.43	0.42	
	5.2.1	Lift speed unladen			m/s	0.60	0.60	0.60	0.60	
	5.3	Lowering speed laden			m/s	0.51	0.51	0.51	0.52	
	5.3.1	Lowering speed unladen			m/s	0.47	0.47	0.47	0.48	
	5.5	Rated drawbar pull laden			N	3200	3200	3200	3050	
	5.5.1	Rated drawbar pull unladen			N	3340	3340	3340	3320	
	5.6	Max. drawbar pull laden			N	9260	9260	9250	8990	
	5.6.1	Max. drawbar pull unladen			N	9120	9120	9120	9130	
	5.7	Gradeability laden			%	12.8	12.8	12.7	11.4	
	5.7.1	Gradeability unladen			%	20.1	20.1	19.9	19.0	
	5.8	Max. gradeability laden			%	21.2	21.2	21.0	19.0	
	5.8.1	Max. gradeability unladen			%	24.8	24.8	25.4	25.9	
5.9	Acceleration time laden			s	4.1	4.1	4.1	4.2		
5.9.1	Acceleration time unladen			s	4.0	4.0	4.0	4.0		
5.10	Brakes					elect./mech.	elect./mech.	elect./mech.	elect./mech.	
E-Motor	6.1	Drive motor hourly capacity			kW	2x4.5	2x4.5	2x4.5	2x4.5	
	6.2	Hoist motor capacity at 15% duty factor			kW	9	9	9	9	
	6.3	Battery equipment to DIN 43531 / 35 / 36 A, B, C, no				DIN 43531 B	DIN 43531 B	DIN 43531 B	DIN 43531 B	
	6.4	Battery voltage			U	V	48	48	48	48
	6.4.1	Battery capacity			K 5	Ah	575L	575L	575L	575L
	6.5	Battery weight				kg	856	856	856	856
6.6	Energy consumption according to VDI cycle				kWh/h					
Miscellaneous	8.1	Drive control								
	8.2	Operating pressure for attachments			bar	250	250	250	250	
	8.3	Oil flow for attachments			l/min					
	8.4	Average noise peak at operator's ears			dB(A)	<70	<70	<70	<70	
	8.5	Trailer coupling, type/DIN				Bolt	Bolt	Bolt	Bolt	

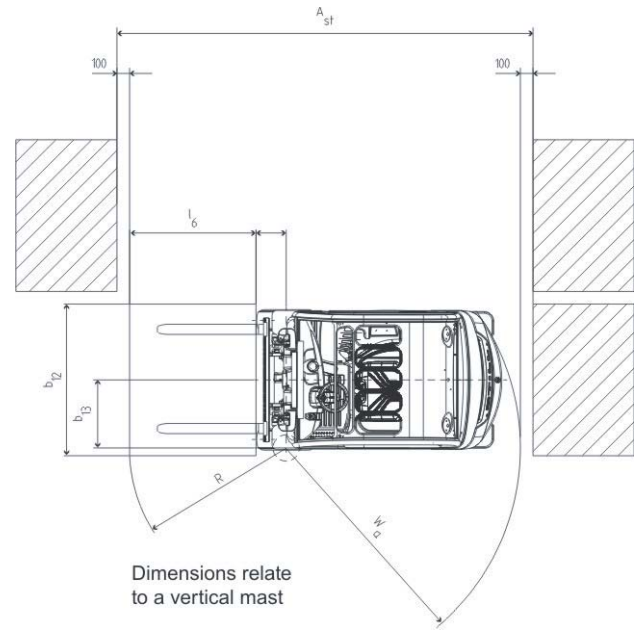
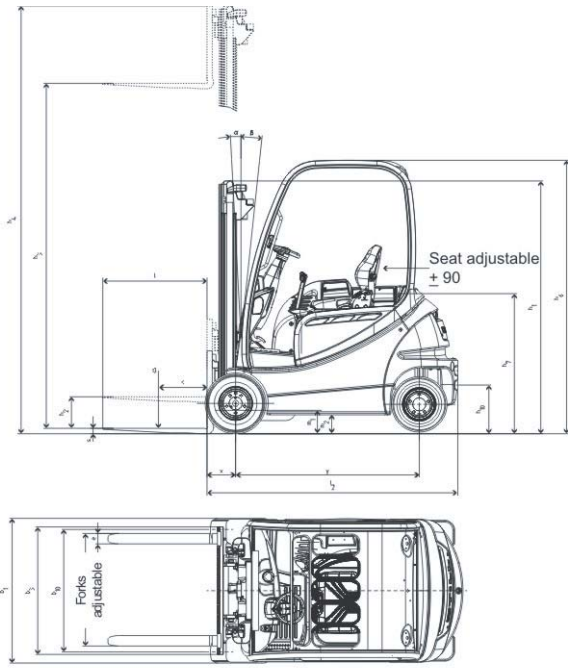
STILL	STILL	STILL	STILL
RX 20-18P/h	RX 20-20	RX 20-20 P	RX 20-20 P/h
Electric	Electric	Electric	Electric
Rider seated	Rider seated	Rider seated	Rider seated
1800	2000	2000	2000
500	500	500	500
355	365	365	365
1448	1540	1469	1448
3343	3212	3225	3453
4442	4667	4633	4888
701	545	592	565
1580	1544	1455	1693
1763	1668	1770	1760
SE	SE	SE	SE
200/50-10	200/50-10	200/50-10	200/50-10
16 x 6-8	15 x 4 1/2-8	16 x 6-8	16 x 6-8
2x	2x	2x	2x
2	2	2	2
942	942	942	942
865	168	865	865
3	3	3	3
8	8	8	8
2160	2160	2160	2160
150	150	150	150
3230	3150	3150	3150
3805	3805	3805	3805
2240	2082	2082	2240
1173	1015	1015	1173
460/350	490	460/350	460/350
2908	2892	2930	2918
2108	2092	2130	2118
1138	1138	1138	1138
40	40	40	40
80	80	80	80
800	800	800	800
ISO II/A	ISO II/A	ISO II/A	ISO II/A
980	980	980	980
90	90	90	90
123	123	123	123
3439	3418	3473	3449
3638	3542	3672	3648
1883	1727	1907	1883
538.5	-	541	538.5
16	16	16	16
16	16	16	16
0.42	0.38	0.38	0.38
0.60	0.52	0.52	0.52
0.52	0.53	0.53	0.53
0.48	0.49	0.49	0.49
2980	2980	2970	2930
3260	3280	3280	3240
8950	8950	8950	8920
9080	9100	9070	9070
10.7	10.5	10.5	10
17.1	17.9	17.8	16.5
17.8	17.6	17.5	16.7
26.4	27.2	25.2	27.2
4.3	4.3	4.3	4.4
4.1	4.1	4.1	4.2
elect./mech.	elect./mech.	elect./mech.	elect./mech.
2x4.5	2x4.5	2x4.5	2x4.5
9	9	9	9
DIN 43531 B	DIN 43531 B	DIN 43531 B	DIN 43531 B
48	48	48	48
700L	575L	575L	700L
1119	856	856	1119
250	250	250	250
<70	<70	<70	<70
Bolt	Bolt	Bolt	Bolt



Dimensions relate to a vertical mast

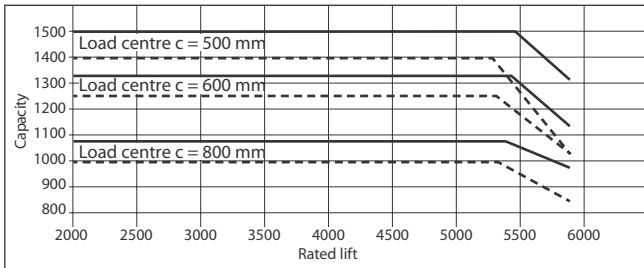
RX 20 Technical Data.

				Telescopic-mast		Hilo - mast		Triplex - mast	
RX20-15 / 16	Rated lift	h ₃	mm	2830 - 4230	4730 - 5430	2975 - 3975	4320 - 5220	5620 - 7870	
	Closed height	h ₁	mm	1960 - 2660	2910 - 3260	1960 - 2460	1960 - 2260	2460 - 3210	
	Free lift Form "B"	h ₂ /h _s	mm	150	150	1330 - 1830	1330 - 1630	1830 - 2580	
	Free lift Form "A"	h ₂ /h _s	mm	150	150	1362 - 1862	1362 - 1662	1862 - 2612	
	Overall height raised Form "B"	h	mm	3480 - 4880	5280 - 6080	3625 - 4625	4970 - 5870	6270 - 8520	
	Overall height raised Form "A"	h	mm	3473 - 4873	5273 - 6073	3593 - 4593	4938 - 5838	6238 - 8488	
	Forward tilt	a	°	3					
	Back tilt	b	°	8		3		6	
	Fork location centre - centre		mm	216 368 445 521 673 670					
	Greatest width	B	mm	1099	1188	1099	1099	1188	
	Overall length	L ₂	mm	1883			1903		
	Load distance	x	mm	355			375		
	Working aisle width	A _{st}	mm	(1000 x 1200) 3209 (1200 x 800) 3333			(1000 x 1200) 3228 (1200 x 800) 3353		
	Tyres	v		18 x 7 - 8	200/50-10	18 x 7 - 8	18 x 7 - 8	200/50-10	
	Tyres	h		15 x 4 1/2 - 8					
	Track	v/h	mm	932/168	990/168	932/168	932/168	990/168	
RX20-16P	Overall length	L ₂	2061			2081			
	Working aisle width	A _{st}	(1000 x 1200) 3408 (1200 x 800) 3607			(1000 x 1200) 3428 (1200 x 800) 3627			
	Tyres	v/h	18 x 7 - 8 / 16 x 6 - 8						
	Track	v/h	mm	932/865	990/865	932/865	932/865	990/865	
RX20-18	Rated lift	h ₃	mm	2830 - 4230	4730 - 5430	2875 - 3875	4170 - 5070	5470 - 7720	
	Closed height	h ₁	mm	1960 - 2660	2910 - 3260	1960 - 2460	1960 - 2260	2460 - 3210	
	Free lift Form "B"	h ₂ /h _s	mm	150	150	1312 - 1812	1312 - 1612	1812 - 2562	
	Free lift Form "A"	h ₂ /h _s	mm	150	150	1312 - 1812	1312 - 1612	1812 - 2562	
	Overall height raised Form "B"	h	mm	3480 - 4880	5280 - 6080	3543 - 4543	4838 - 5738	6138 - 8388	
	Overall height raised Form "A"	h	mm	3473 - 4873	5273 - 6073	3543 - 4543	4838 - 5738	6138 - 8388	
	Forward tilt	a	°	3					
	Back tilt	b	°	8		3		6	
	Greatest width	B	mm	1138	1188	1138	1138	1188	
	Overall length	L ₂	mm	1983			2003		
	Load distance	x	mm	355			375		
	Working aisle width	A _{st}	mm	(1000 x 1200) 3309 (1200 x 800) 3433			(1000 x 1200) 3327 (1200 x 800) 3452		
	Tyres	v/h		200/50 - 10 / 16 x 6 - 8					
	Track	v/h	mm	942/168	990/168	942/168	942/168	990/168	
	RX20-18P/h	Overall length	L ₂	2108			2128		
		Working aisle width	A _{st}	(1000 x 1200) 3439 (1200 x 800) 3638			(1000 x 1200) 3459 (1200 x 800) 3658		
Tyres		v/h	200/50 - 10 / 16 x 6 - 8						
Track		v/h	mm	942/865	990/865	942/865	942/865	990/865	
RX20-20	Rated lift	h ₃	mm	2750 - 4150	4630 - 5330	2870 - 3870	4165 - 5065	5665 - 7915	
	Closed height	h ₁	mm	1960 - 2660	2910 - 3260	1960 - 2460	1960 - 2260	2460 - 3210	
	Free lift Form "B"	h ₂ /h _s	mm	150	150	1330 - 1830	1330 - 1630	1830 - 2580	
	Free lift Form "A"	h ₂ /h _s	mm	150	150	1405 - 1905	1405 - 1705	1905 - 2655	
	Overall height raised Form "B"	h	mm	3400 - 4800	5300 - 6000	3520 - 4520	4830 - 5730	6330 - 8580	
	Overall height raised Form "A"	h	mm	3325 - 4725	5225 - 5925	3445 - 4445	4755 - 5655	6255 - 8505	
	Forward tilt	a	°	3					
	Backward tilt	b	°	8		3		6	
	Overall length	L ₂	mm	2092			2114		
	Load distance	x	mm	365			387		
	Working aisle width	A _{st}	mm	(1000 x 1200) 3418 (1200 x 800) 3542			(1000 x 1200) 3438 (1200 x 800) 3563		
	Tyres	v/h		200/50 - 10 / 16 x 6 - 8					
	Track	v/h	mm	942/168	990/168	942/168	942/168	990/168	
	RX20-20P	Overall length	L ₂	2130			2152		
		Working aisle width	A _{st}	(1000 x 1200) 3473 (1200 x 800) 3672			(1000 x 1200) 3495 (1200 x 800) 3694		
		Tyres	v/h	200/50 - 10 / 16 x 6 - 8					
Track		v/h	mm	942/865	990/865	942/865	942/865	990/865	
RX20-20Ph	Overall length	L ₂	2118			2140			
	Working aisle width	A _{st}	(1000 x 1200) 3449 (1200 x 800) 3648			(1000 x 1200) 3471 (1200 x 800) 3670			
	Tyres	v/h	200/50 - 10 / 16 x 6 - 8						
Track	v/h	mm	942/865	990/865	942/865	942/865	990/865		

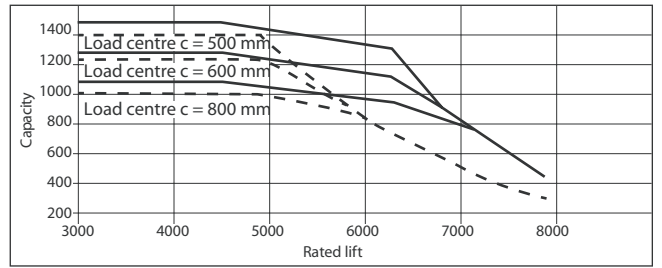


— Fork carriage
 - - - - - Hook-on sideshift

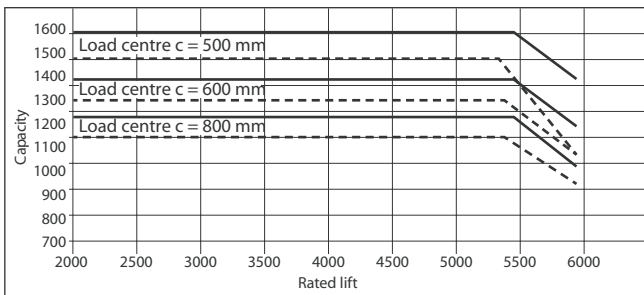
Capacities RX 20 - 15 Tele -/ Hilo - mast



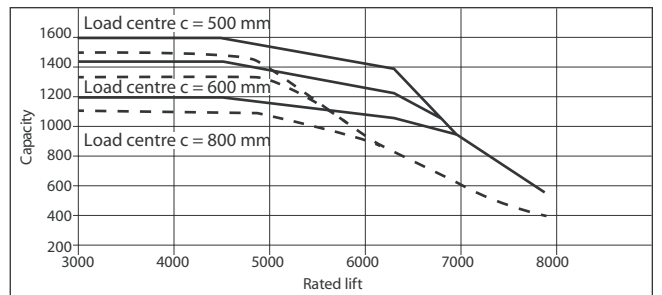
Capacities RX 20 - 15 Triplex mast



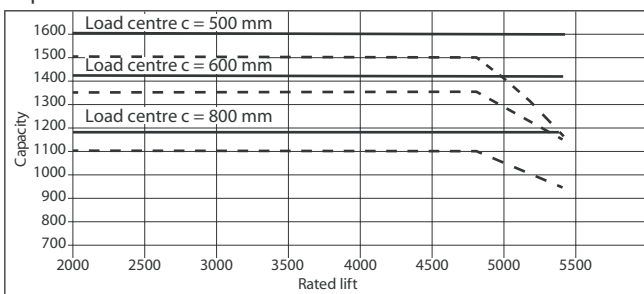
Capacities RX 20 - 16 Tele -/ Hilo - mast



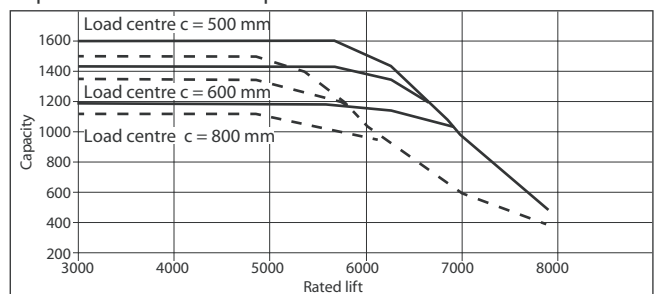
Capacities RX 20 - 16 Triplex mast



Capacities RX 20 - 16P Tele -/ Hilo - mast

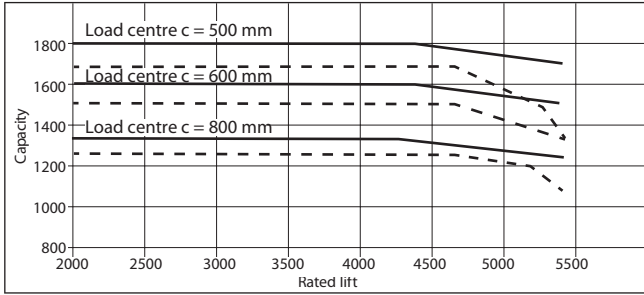


Capacities RX 20 - 16P Triplex mast

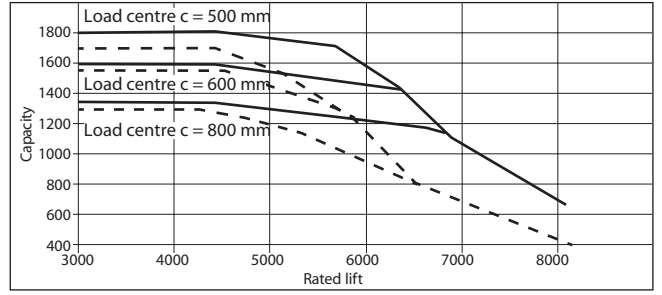


RX 20 Technical data.

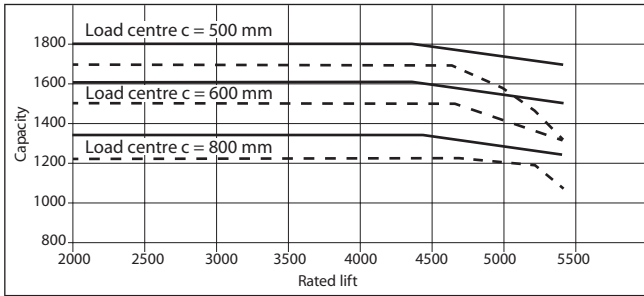
Capacities RX 20 - 18 Tele -/ Hilo - mast



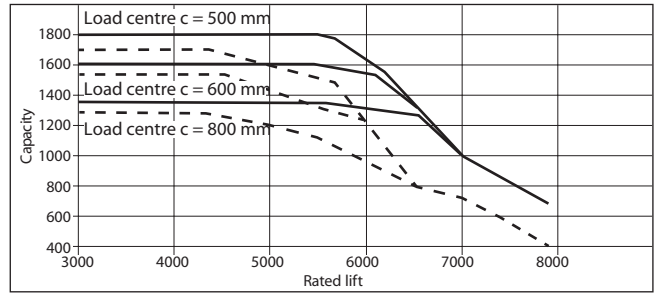
Capacities RX 20 - 18 Triplex mast



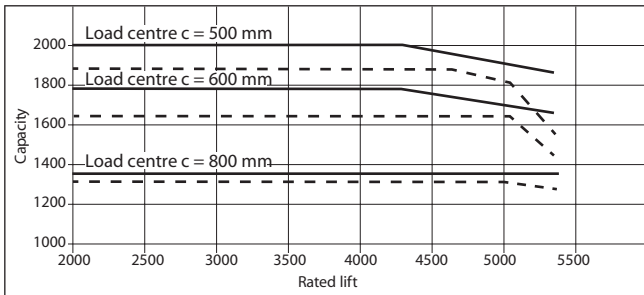
Capacities RX 20 - 18P/h Tele -/ Hilo - mast



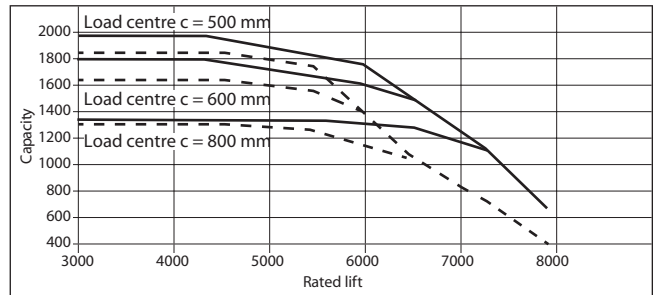
Capacities RX 20 - 18P/h Triplex mast



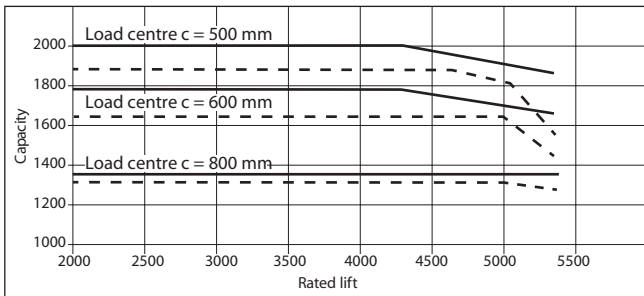
Capacities RX 20 - 20 Tele -/ Hilo - mast



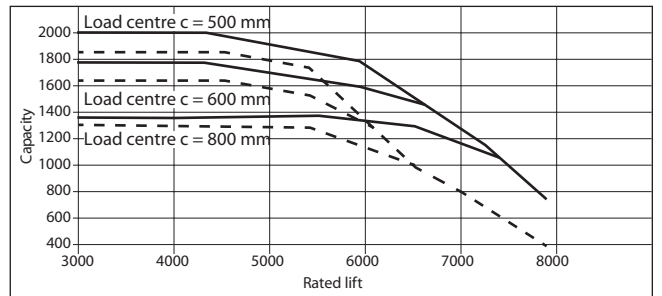
Capacities RX 20 - 20 Triplex mast



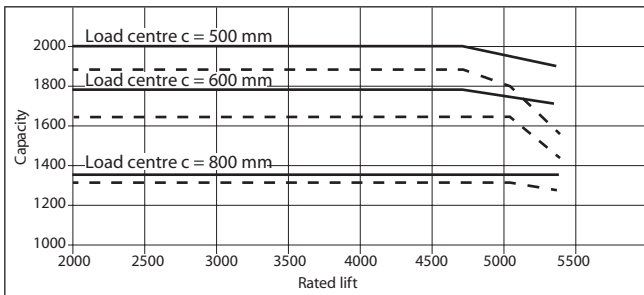
Capacities RX 20 - 20P Tele -/ Hilo - mast



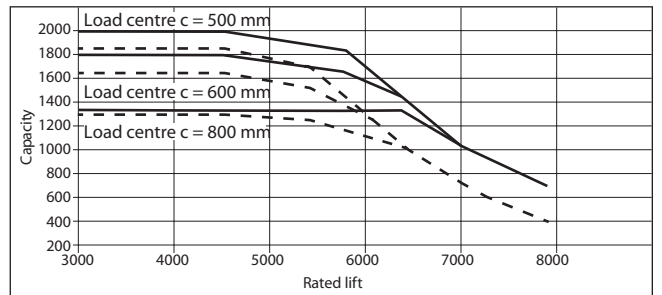
Capacities RX 20 - 20P Triplex mast



Capacities RX 20 - 20P/h Tele -/ Hilo - mast



Capacities RX 20 - 20P/h Triplex mast



— Fork carriage
 - - - Hook-on sideshift

Drive.

The two energy efficient and noise optimised three-phase drive units on the RX 20 act on the front wheels. High traction power and driving dynamics, even on uneven ground or when climbing ramps, ensure a high turnround of goods. A special feature in this is the uniformly strong development of the power from a standstill up to maximum speed. Thus for instance there is always maximum power available at kerbs or when pushing pallets.

The maintenance-free, efficiency-optimised three-phase drive guarantees a long battery operating life. Thanks to complete enclosure the whole drive is protected against the ingress of damaging dust and water spray, so that even applications in the worst conditions are no problem.

In addition to this, thanks to their electrical regenerative braking, the motors feed back up to 15% of the energy into the battery when the drive pedal is released, and thus increase the useful time from a battery charge by up to 1.5 hours. This means that interim battery charging or even changing is often not necessary.

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 area. This arrangement provides very good cooling without additional fans or filters and makes the work pleasantly quiet and reliable.

Electrical system.

The electrical system on the RX 20 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. for container or lorry use, right up to the roof.
- Triplex: for use where there are low doorways but high lift heights, for utilisation of warehouses right up to the roof.

Hydraulic system.

The speed of the pump motor is demand controlled and precise. It operates only when either the valve levers or steering wheel are moved, thus providing longer usage from a battery charge. The sensitive operation of the hydraulics increases working safety by positioning loads to the nearest millimetre. The hydraulics improve the energy consumption thanks to:

- The high efficiency of hydraulic pump even at low speeds (e.g. when steering). Bronze coated backing washers with very good anti-friction properties seal the gears against the housing thereby reducing internal losses.
- The replacement of pre-load valves with load retention valves so that, when tilting unladen for example, the pump does not have to overcome a high pre-set valve pre-load with a defined hydraulic

pressure. Furthermore the whole hydraulic system has a separate pressure relief valve.

The priority valve for the steering is directly connected to the pump so that hydraulic interfaces and hoses are done away with. This ensures safer, cleaner operation.

Driver's compartment.

The driver's work place in the RX 20.

- The large footwell 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 20 to whatever the driver is familiar with, for a maximum turnround of goods.
- The drive direction switch on the valve lever (hoist and lower) 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 20 is subjected to constant on-board diagnosis.
- With 5 selectable drive programs the driver can match the driving characteristics of the RX 20 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 turnaround performance.
- The driver's compartment of the RX 20 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- 20 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 20 is 1000 hours or 12 months. These intervals save time and maintenance costs especially in one shift operation, where the 1000 hours roughly corresponds 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 20.



Further information on the RX 20 is available
on our website: [www.still.de /RX20](http://www.still.de/RX20)

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