

FM Technical Data.

Rider Reach Truck.



Rider Reach Truck.



Standard equipment.

Driver's compartment.

Continuous research and development have greatly improved the driver's environment on the FM.

- Adjustable steering wheel with fore and aft seat adjustment allows the driver to create his ideal working position.
- Comfort seat features hydraulic damping adjustable to the driver's body weight. Seat contour shaped to give good support. The drive interlock switch must be depressed to allow truck movement.
- Option: Proportional adjustment of driver's seat and foot pedals guarantees an ergonomically correct seating position.
- Handles and an extra step are provided by the overhead guard uprights which facilitate safe entry and exit for the driver.
- Clear view mast and good all round visibility and the optimised-visibility overhead guard make for optimum safety of operation.
- Control is through a multi-function joystick lever. For safer operation, selection of drive direction and hydraulic functions can be achieved without changing grip.
- Option: Individual control of hydraulics by four levers.
- Upholstered arm rest.
- A display panel for active operating status and service information shows ready state, driving direction, parking brake status, wheelbase indicator, inching, operating hours, battery state, brush monitoring (not on the FMI), service interval. In the event of a malfunction, there is a fault signal.
- On the FMI five (four + inching) driving profiles selectable by the driver make it possible to influence the acceleration, deceleration, plugging and speed.

Power steering.

- Steering wheel operates electrically, thus removing the high-maintenance mechanical link with the steer motor.
- The maintenance-free, directly geared steering motor is controlled electronically from a sensor on the steering column and operates on demand.
- Reduced energy consumption by virtue of the steering electronics being activated only when the steering wheel is moved.

Mast.

- Triplex clear view mast with free lift as standard for utilisation of space up to roof level.
- Nested I-beam mast sections and integral hoist cylinders, with the lift chains running behind, provide optimal visibility.
- Option: Integral mast side shift with 100 mm lateral movement reduces time lost manoeuvring when positioning loads in racking. Efficient design has removed traditional wear parts such as hose take-ups and hose reels. Hydraulic pipe-work routed within the mast profile eliminates potentially hazardous external hoses.

Hydraulics.

The FM is fitted as standard with a modern MOSFET pulse controller (MOSFET converter regulation on the FMI) for the pump motor. In conjunction with the proportional control valve, this gives particularly sensitive control of hydraulic functions.

- Lifting/lowering, reach, tilt and side shift speeds are all independently adjustable.
- Stepless control of movements improves safety of operation.
- Pump motor speed under pulse controller (converter regulation on the FMI) saves energy and reduces noise.
- Powerful series wound motor (three phase motor on the FMI).

Drive unit.

MOSFET pulse controller (MOSFET converter regulation on the FMI) gives smooth, stepless drive characteristics from rest to maximum speed with economical use of battery power.

- Ventilated shunt wound motor (three phase motor on the FMI) does not rotate when steering hence no cable wear.

On board monitoring of the following items for possible defects makes it possible to control down time:

- Brush monitoring (not on the FMI).
- current and temperature.
- general malfunction monitoring.
- Spur and bevel gear box is of energy efficient design.
- Motor torque compensation ensures accurate steering and prevents reaction at the steering wheel when accelerating and braking.

Brakes.

The braking system consists of a wear-free generator brake plus an additional foot brake which operates the internal shoe brakes on the load wheels. The electro-magnetic disc brake acts on the motor shaft and serves as a parking brake.

- When driving, regenerative braking is triggered automatically when the drive pedal or the drive foot switch is released, thus feeding recovered energy back into the battery (dead man principle).

Central control.

- Compact installation of the circuitry and controller provides high safety standards.
- Speeds can be programmed: Main hoist lift / lower, travel speed forwards / reverse, acceleration and deceleration, inching speed, mast reach, mast tilt and mast side shift as well as the ramp functions when reaching forwards and backwards.
- Diagnostic system activated through an easily accessible central diagnostic plug.

Battery.

- For maintenance, the battery can be moved forward using the mast reach.
- For multi-shift use the battery can be changed with a hoist or optionally using a battery roller track.
- The use of larger batteries and / or increasing the wheel base will give a higher residual capacity.

Safety.

- The trucks are built in compliance with machinery guideline 98 / 37 / EC and carry the "CE" symbol.
- STILL is certified to ISO 9001.

FM-Drive In.

Overhead guard for drive-in racking installations for the FM reach truck.

Drive-in racking installations are used where block stacking is not possible because of fragile loads, or where a small number of different articles have to be stored in very large quantities and it is wished to achieve this without the additional working aisles which would be necessary for a conventionally racked warehouse.

If the installation is used as single entry racking the loading and unloading is carried out from one side on the LIFO (last in, first out) principle. When configured as drive through racking, either side is used and loading and unloading are carried out separately under the FIFO (first in, first out) principle.

Only one transfer aisle is necessary, which the reach truck uses to allow entry into the various channels. The pallets are set down on supports which protrude into the channels.

For this reason the overhead guard of the reach truck is cranked in to a specific width dimension. The height above the floor up to the cropping dimension also has to be taken into account.

For easier and faster entry and exit to and from the channel, it is recommended that guide rails be used where the depth of entry is greater than two pallet lengths.

When filling a drive-in racking warehouse, care should be taken to ensure that the pallets are put into stock in a vertical sequence, starting from the back. They are taken out of stock in reverse order.



FM-TK.

Enclosed Driver's cab, heated (for model FM).

The following are arguments in favour of an enclosed driver's cab:

- enhanced work place
- working in normal clothing
- increase in personal well-being with thermostatically regulated interior temperature
- reduction in health risks caused by temperature differences, which can be up to 60° C in certain operating conditions
- fewer days lost through sickness
- higher work output
- the full shift period can be utilised because breaks to recover from the cold are no longer necessary
- safeguards the truck components as no climate change is necessary

The driver's cab is available as a heated cold store cab for continuous use down to -30°C or as a cab for unheated buildings. The insulated cab is constructed so that it also functions as an overhead guard.

Fresh air is supplied through ventilation flaps. Thermostatically regulated interior space heater. Large double glazed screens, heated or unheated depending on the application, provide excellent all round vision.

Non-dazzle cab lighting on the cab roof. Intercom system and switch panel fitted on the cab wall. Drive interlock switch integrated into the door closer mechanism. As an option, spotlights, rotating or flashing beacons can be installed on the cab roof.



MMS data terminal.

Installation of the Lambda*pro radio data terminal and hand scanner on the FM / FMi reach truck.

Where stated on the order, new trucks will be prepared for installation to EHI / DHI standards.

Retro-fitting of old trucks is possible after discussion with STILL.



HA Height indicator.

Saves time.

The height indicator makes it easier for the forklift truck driver to approach different shelf heights in the warehouse. Thanks to the precision of approach, it is no longer necessary repeatedly to actuate the hydraulics to correct the height. This saves time and the lower energy requirement is also measurable.

Well priced.

With the HA height indicator for use with reach trucks and stackers, an economic solution for precise approach to shelf heights is available to the user.

Measures in 3 mm steps.

The height indicator registers the lift height and displays it in 3 mm increments.

Features.

- Visual input and output aid for all lift heights in main lift
- Time saving, precise entry into pallet locations
- Instruments integrated in display (very good view of LED display, even in poor lighting conditions)
- Increased safety through function monitoring



HVW height pre-selection system.

Features.

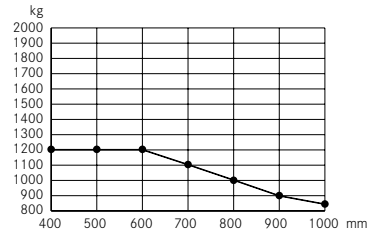
- Automatic stop at target point
- Display resolution: 1 mm
- Assistant function for the functional stages of the putting into and taking out of stock cycle
- Height pre-selection, height indicator and operating indicators integrated into one display
- Suitable for alternating in and out of cold store use - 30° C
- 8 storage locations, 20 shelf heights can be programmed
- 160 pre-selectable shelf levels
- Simple fast programming of the shelf levels
- Fast precise positioning of the desired shelf levels
- Increases of the turnaround of loads due to fast positioning without manual height corrections
- Great safety for driver and goods when putting into and taking out of stock, even at high lift heights
- Simple operation even for inexperienced drivers
- Individual adjustment to different warehouse conditions
- Sensitive handling of delicate goods
- Ideal even in dark storage areas
- Ergonomic seating position - protects the neck
- Good value system - inexpensive turnaround of goods



Residual capacity / load centre.

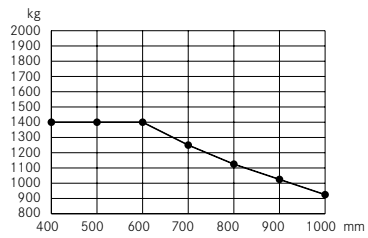
FM 12 / FM 12i

Battery 48 V / 420 L · Wheelbase $y = 1370$ mm



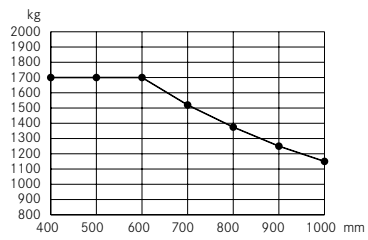
FM 14 / FM 14i

Battery 48 V / 420 L · Wheelbase $y = 1370$ mm



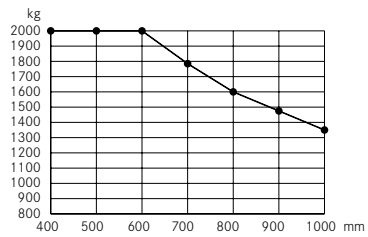
FM 17 / FM 17i

Battery 48 V / 560 L · Wheelbase $y = 1442$ mm



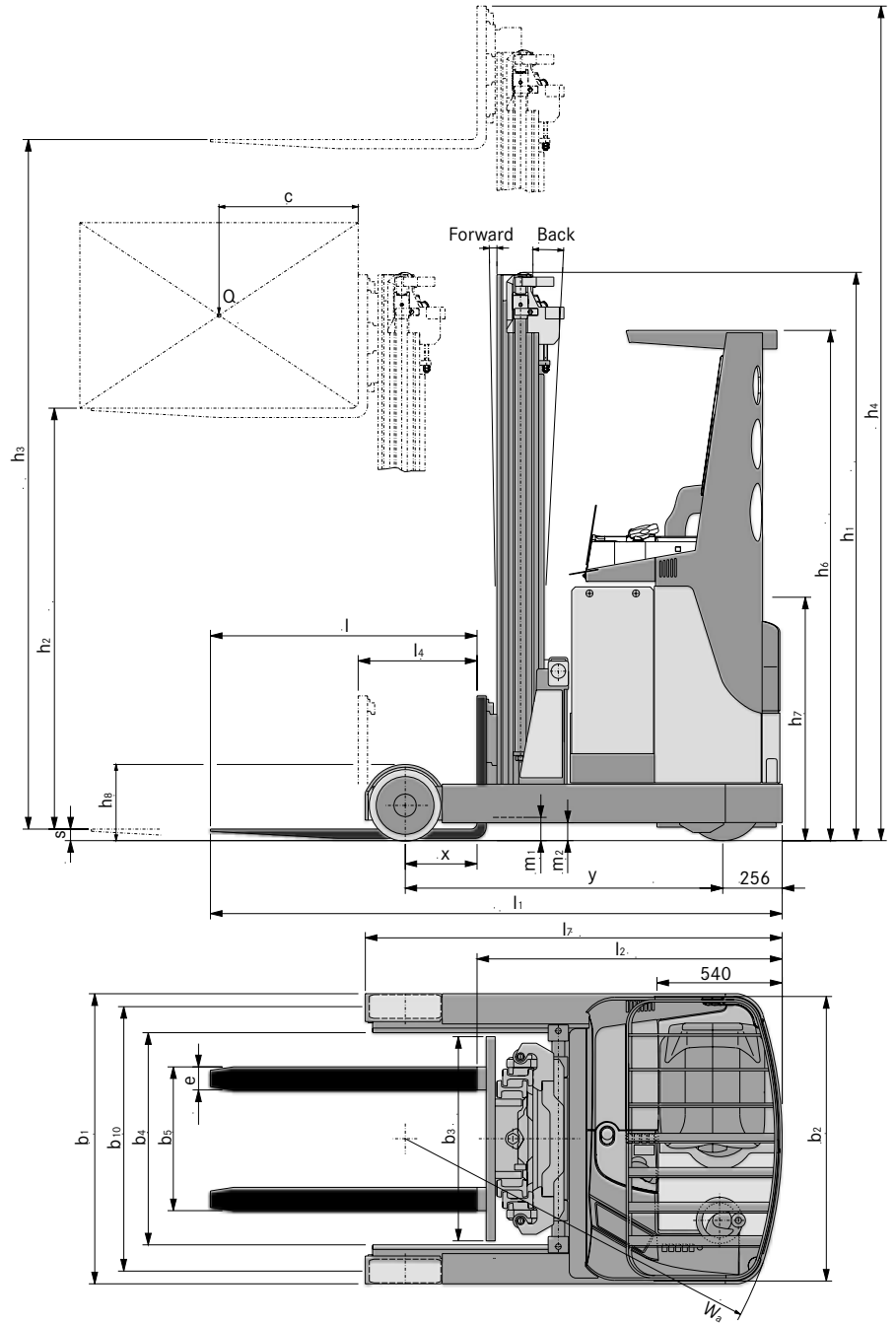
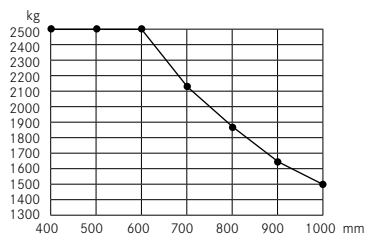
FM 20 / FM 20 H / FM 20i / FM 20i H

Battery 48 V / 560 L (700 L) · Wheelbase $y = 1514$ mm



FM 25i

Battery 48 V / 700 Ah · Wheelbase $y = 1698$ mm



In accordance with VDI guidelines 2198 or 3597, this specification applies to the standard model only.
Alternative tyres, mast types, ancillary equipment, etc. could result in different values.

		STILL	STILL	STILL							
Characteristics	1.1	Manufacturer			STILL	STILL	STILL				
	1.2	Manufacturer's model designation		FM 14 N	FM 17 N	FM 20 N					
	1.3	Power supply (electric, diesel, petrol, gas)		electric	electric	electric					
	1.4	Operation (stand-on, rider seated)		rider seated	rider seated	rider seated					
	1.5	Capacity / load	Q	kg	1400	1700	2000				
	1.6	Load centre	c	mm	600	600	600				
	1.8	Load distance	x	mm	341	250	403	312	384	294	
	1.9	Wheelbase	y	mm	1356		1428		1500		
	Weight	2.1	Weight (inc. battery) ⁴⁾		kg	3000	3200	3030	3230	3260	3450
2.3		Axle load, forks back, unladen		kg	1667 / 1133	1891 / 1300	1927 / 1103	1959 / 1271	2028 / 1232	2050 / 1400	
2.4		Axle load, forks forw., unladen		kg	569 / 3831	669 / 3931	446 / 4284	551 / 4379	460 / 4800	552 / 4898	
2.5		Axle load forks back, laden, drive / load end		kg	1600 / 2800	1530 / 3070	1692 / 3038	1616 / 3314	1740 / 3520	1642 / 3808	
Wheels Tyres		3.1	Tyres (rubber, Vulkollan, pneumatic)			Vulkollan	Vulkollan	Vulkollan	Vulkollan	Vulkollan	Vulkollan
	3.2	Tyre size, drive end		mm	Ø 343 x 135	Ø 343 x 135	Ø 343 x 135	Ø 343 x 135	Ø 343 x 135	Ø 343 x 135	
	3.3	Tyre size, load end		mm	Ø 310 x 100	Ø 310 x 100	Ø 310 x 100	Ø 310 x 100	Ø 310 x 100	Ø 310 x 100	
	3.5	Wheels, number (x = drive wheel) drive end / load end			2 / 1 x	2 / 1 x	2 / 1 x	2 / 1 x	2 / 1 x	2 / 1 x	
	3.6	Track width, load end	b ₁₀	mm	1010		1010		1010		
	3.7	Track width, drive end	b ₁₁	mm	-		-		-		
	Dimensions	4.1	Tilt angle, mast / carriage		degrees	1 / 3	0.5 / 2	1 / 3		1 / 3	
4.2		Closed mast height	h ₁	mm	2250 / 2450 / 2700		2250 / 2450		2250 / 2450		
4.3		Free lift	h ₂	mm	1620 / 1820 / 2070		1620 / 1820		1620 / 1820		
4.4		Lift height	h ₃	mm	5150 / 5750 / 6500		5150 / 5750		4975 / 5575		
4.5		Height, mast raised	h ₄	mm	5780 / 6380 / 7130		5780 / 6380		5605 / 6205		
4.7		Height to top of overhead guard (cabin)	h ₆	mm	2200		2200		2200		
4.8		Seat height / platform height	h ₇	mm	1050		1050		1050		
4.10		Height of straddle legs and load wheel	h ₈	mm	330		330		330		
4.19		Overall length ¹⁾	l ₁	mm	2435 od. 2285	2526 od. 2376	2445 od. 2295	2536 od. 2386	2536 od. 2386	2626 od. 2476	
4.20		Length to front face of forks ¹⁾	l ₂	mm	1285	1376	1295	1386	1386	1466	
4.21		Overall width	b ₁ / b ₂	mm	1120 / 1096		1120 / 1096		1120 / 1096		
4.22		Fork dimensions	s / e / l	mm	40 / 100 / 1150 od. 1000		50 / 100 / 1150 od. 1000		50 / 100 / 1150 od. 1000		
4.23		Fork carriage to DIN 15173, class / form A, B			2 / B		2 / B		2 / B		
4.24		Fork carriage width	b ₃	mm	1040 / 730		1040 / 730		1040 / 730		
4.25		Overall fork width	b ₅	mm	620		620		620		
4.26		Width between straddle legs / load platforms	b ₄	mm	784		784		784		
4.28		Fork reach ³⁾	l ₄	mm	553	462	625	534	606	516	
4.31		Floor clearance under mast, laden	m ₁	mm	100		100		100		
4.32		Floor clearance, centre of wheelbase	m ₂	mm	76		76		76		
4.33	Working aisle width with 1000 x 1200 pallet crosswise ⁵⁾	A _{st}	mm	2492	2583	2499	2590	2586	2676		
4.34	Working aisle width with 800 x 1200 pallet lengthwise ⁵⁾	A _{st}	mm	2692	2783	2699	2790	2786	2876		
4.35	Outer turning radius	W _a	mm	1633		1702		1770			
4.37	Length over straddle legs	l ₇	mm	1798		1870		1942			
Performance	5.1	Speed		km / h	10.7 / 11		10.6 / 11		10.4 / 11		
	5.2	Lifting speed		m / s	0.36 / 0.60		0.32 / 0.60		0.28 / 0.48		
	5.3	Lowering speed		m / s	0.52 / 0.46		0.54 / 0.46		0.50 / 0.40		
	5.4	Reach speed		m / s	variable		variable		variable		
	5.7	Gradeability		%	10 / 15		10 / 15		10 / 15		
	5.8	Max. gradeability		%	10 / 15		10 / 15		10 / 15		
	5.9	Acceleration time (over 10 m)		s	5.5 / 4.9		5.6 / 4.9		5.8 / 5.0		
	5.10	Brakes			Generator / hydro-mechanical		Generator / hydro-mechanical		Generator / hydro-mechanical		
	Electric Motors	6.1	Drive motor, rating S2 = 60 min		kW	5.2		5.2		5.2	
		6.2	Hoist motor, rating at S3 = 15 %		kW	9.0		9.0		9.0	
6.3		Battery to IEC 254-2; A, B, C, no			IEC 254-2, B		IEC 254-2, B		IEC 254-2, B		
6.4		Battery voltage, capacity K5		V / Ah	48 / 420 L	48 / 560 L	48 / 420 L	48 / 560 L	48 / 560 L	48 / 700 L	
6.5		Battery weight + / - 5% (dependent on manufacturer)		kg	750	940	750	940	940	1120	
6.6		Energy consumption according to VDI cycle		kWh/h	4.6		4.8		5.1		
Other	8.1	Drive control			electronic / stepless		electronic / stepless		electronic / stepless		
	8.2	Operating pressure for attachments		bar	140		140		140		
	8.3	Oil flow for attachments		l / min	18		18		18		
	8.4	Noise peak at operator's ears		dB(A)	70		70		70		

- 1) Reduced by 40 mm when fitted with integral mast sideshift
- 2) Reduced by 31 mm when fitted with integral mast sideshift
- 3) Reduced by 40 mm when fitted with integral mast sideshift
- 4) h₁ = 2250 mm
- 5) VDI 3597, dimensions without mast sideshift

FM, FMi, FM H, FMi H, FM 25i.

In accordance with VDI guidelines 2198 or 3597, this specification applies to the standard model only.
Alternative tyres, mast types, ancillary equipment, etc. could result in different values.

			STILL		STILL		
			FM 12	FM 12i*	FM 14	FM 14i*	
Characteristics	1.1	Manufacturer					
	1.2	Manufacturer's model designation					
	1.3	Power supply (electric, diesel, petrol, gas)		electric		electric	
	1.4	Operation (stand-on, rider seated)		rider seated		rider seated	
	1.5	Capacity / load	Q kg	1200		1400	
	1.6	Load centre	c mm	600		600	
	1.8	Load distance ²⁾	x mm	456	414	341	268
	1.9	Wheelbase	y mm	1370		1370	
	Weight	2.1	Weight (inc. battery) ⁴⁾	kg	2780	3035	3235
2.3		Axle load, forks back, unladen	kg	1875 / 905	1995 / 1040	2045 / 1190	2078 / 1347
2.4		Axle load, forks forw., unladen	kg	724 / 3256	625 / 2810	737 / 3898	832 / 3993
2.5		Axle load forks back, laden, drive / load end	kg	1748 / 2232	1803 / 2632	1778 / 2857	1735 / 3090
3.1		Tyres (rubber, Vulkollan, pneumatic)		Vulkollan		Vulkollan	
Wheels Tyres	3.2	Tyre size, drive end	mm	Ø 343 x 135		Ø 343 x 135	
	3.3	Tyre size, load end	mm	Ø 310 x 100		Ø 310 x 100	
	3.5	Wheels, number (x = drive wheel) drive end/load end		2 / 1 x		2 / 1 x	
	3.6	Track width, load end	b ₁₀ mm	1140		1140	
	3.7	Track width, drive end	b ₁₁ mm	-		-	
	4.1	Tilt angle, mast/carriage, forwards / backwards	degrees	1 / 3 0.5 / 2		1 / 3 0.5 / 2	
	4.2	Closed mast height	h ₁ mm	2260 / 2460 / 2710		2250 / 2450 / 2700	
Dimensions	4.3	Free lift	h ₂ mm	1630 / 1830 / 2080		1620 / 1820 / 2070	
	4.4	Lift height	h ₃ mm	5240 / 5840 / 6590		5150 / 5750 / 6500	
	4.5	Height, mast raised	h ₄ mm	5870 / 6280 / 7030		5780 / 6380 / 7130	
	4.7	Height to top of overhead guard (cabin)	h ₆ mm	2200		2200	
	4.8	Seat height / platform height	h ₇ mm	1050		1050	
	4.10	Height of straddle legs and load wheel	h ₈ mm	330		330	
	4.19	Overall length ¹⁾	l ₁ mm	2320 od. 2170	2362 od. 2212	2435 od. 2285	2508 od. 2385
	4.20	Length to front face of forks ¹⁾	l ₂ mm	1170	1212	1285	1358
	4.21	Overall width	b ₁ / b ₂ mm	1250 / 1226		1250 / 1226	
	4.22	Fork dimensions	s / e / l mm	40 / 100 / 1150 od. 1000		50 / 100 / 1150 od. 1000	
	4.23	Fork carriage to DIN 15173, class / form A, B		2 / B		2 / B	
	4.24	Fork carriage width	b ₃ mm	1040 / 730		1040 / 730	
	4.25	Overall fork width	b ₅ mm	620		620	
	4.26	Width between straddle legs / load platforms	b ₄ mm	914		914	
	4.28	Fork reach ³⁾	l ₄ mm	662	626	553	480
	4.31	Floor clearance under mast, laden	m ₁ mm	100		100	
	4.32	Floor clearance, centre of wheelbase	m ₂ mm	76		76	
4.33	Working aisle width with 1000 x 1200 pallet crosswise ⁵⁾	A _{st} mm	2377	2419	2492	2565	
4.34	Working aisle width with 800 x 1200 pallet lengthwise ⁵⁾	A _{st} mm	2577	2619	2692	2765	
4.35	Outer turning radius	W _a mm	1633	1633	1633	1633	
4.37	Length over straddle legs	l ₇ mm	1798		1798		
Performance	5.1	Speed	km / h	10.8 / 11	12 / 12*	10.7 / 11	12 / 12*
	5.2	Lifting speed	m / s	0.38 / 0.60		0.36 / 0.60	
	5.3	Lowering speed	m / s	0.52 / 0.44		0.52 / 0.46	
	5.4	Reach speed	m / s	variable		variable	
	5.7	Gradeability	%	10 / 15		10 / 15	
	5.8	Max. gradeability	%	10 / 15		10 / 15	
	5.9	Acceleration time (over 10 m)	s	5.5 / 4.9	4.8 / 4.5*	5.5 / 4.9	5.0 / 4.6*
5.10	Brakes		Generator / hydro-mechanical		Generator / hydro-mechanical		
Electric Motors	6.1	Drive motor, rating S2 = 60 min	kW	5.2	6.0*	5.2	6.0*
	6.2	Hoist motor, rating at S3 = 15 %	kW	12.0	11.5*	12.0	11.5*
	6.3	Battery to IEC 254-2; A, B, C, no		IEC 254-2, C		IEC 254-2, C	
	6.4	Battery voltage, capacity K5	V / Ah	48 / 420 L		48 / 420 L	48 / 560 L
	6.5	Battery weight + / - 5% (dependent on manufacturer)	kg	750		750	940
	6.6	Energy consumption according to VDI cycle	kWh/h	4.6	4.6 *	4.6	4.6*
Other	8.1	Drive control		electronic/stepless	3-phase current*	electronic/stepless	3-phase current*
	8.2	Operating pressure for attachments	bar	140		140	
	8.3	Oil flow for attachments	l / min	18		18	
	8.4	Noise peak at operator's ears	dB(A)	70		70	

1) Increased by 31 mm when fitted with integral mast sideshift

2) Reduced by 31 mm when fitted with integral mast sideshift

3) Reduced by 40 mm when fitted with integral mast sideshift

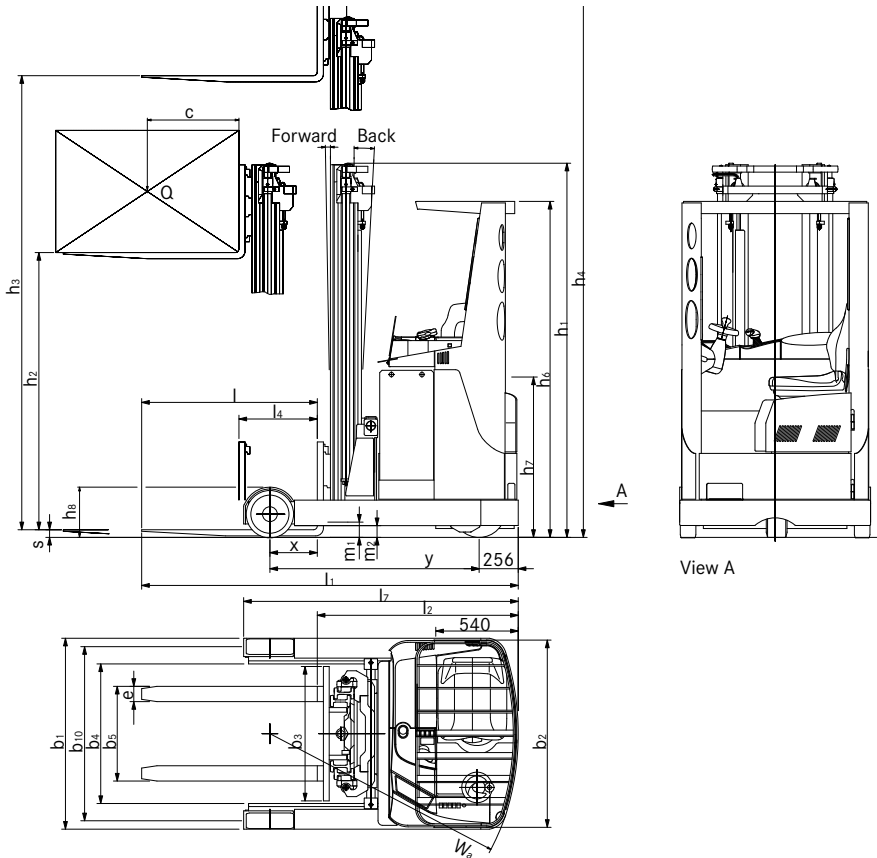
4) h₁ = 2250 mm

5) VDI 3597, dimensions without mast sideshift

* Details for FMi

Characteristics	1.1		STILL			STILL		STILL		STILL				
	1.2		FM 17		FM 17i*	FM 20	FM 20i*	FM 20 H	FM 20i H*	FM 25i*				
	1.3		electric			electric		electric		electric				
	1.4		rider seated			rider seated		rider seated		rider seated				
	1.5	Q	kg	1700			2000		2000		2500			
	1.6	c	mm	600			600		600		600			
	1.8	x	mm	458	403	330	475	402	364		540			
	1.9	y	mm	1442			1514		1514		1698			
	Weight	2.1		kg	3065	3265	3455	3296	3496	4010		4010		
2.3			kg	2037 / 1028	2108 / 1157	2148 / 1307	2178 / 1118	2224 / 1262	2400 / 1610		2610 / 1400			
2.4			kg	500 / 4265	616 / 4349	717 / 4438	527 / 4769	627 / 4859	600 / 5410		690 / 5820			
2.5			kg	1868 / 2897	1873 / 3092	1827 / 3328	2011 / 3285	1960 / 3526	2090 / 3526		2470 / 4040			
Wheels Tyres		3.1			Vulkollan			Vulkollan		Vulkollan		Vulkollan		
	3.2		mm	Ø 343 x 135			Ø 343 x 135		Ø 343 x 135		Ø 343 x 135			
	3.3		mm	Ø 310 x 100			Ø 310 x 100		Ø 310 x 100		Ø 310 x 122			
	3.5			2 / 1 x			2 / 1 x		2 / 1 x		2 / 1 x			
	3.6	b ₁₀	mm	1140			1140		1140		1164			
	3.7	b ₁₁	mm	-			-		-		-			
	Dimensions	4.1		degrees	1 / 3			1 / 3		2 / 4		-2 / +4		
4.2		h ₁	mm	2250 / 2450			2250 / 2450		3600		2450			
4.3		h ₂	mm	1620 / 1820			1620 / 1820		2970		1765			
4.4		h ₃	mm	5150 / 5750			4975 / 5575		8725		5475			
4.5		h ₄	mm	5780 / 6380			5605 / 6205		9355		6160			
4.7		h ₆	mm	2200			2200		2200		2200			
4.8		h ₇	mm	1050			1050		1050		1050			
4.10		h ₈	mm	330			330		330		330			
4.19		l ₁	mm	2390 od. 2240	2445 od. 2295	2518 od. 2368	2445 od. 2295	2518 od. 2368	2556 od. 2406		2564 od. 2414			
4.20		l ₂	mm	1240	1295	1368	1295	1368	1406		1414			
4.21		b ₁ / b ₂	mm	1250 / 1226			1250 / 1226		1250 / 1226		1294 / 1226			
4.22		s / e / l	mm	50 / 100 / 1150 od. 1000			50 / 100 / 1150 od. 1000		50 / 100 / 1150 od. 1000		50 / 120 / 1150 od. 1000			
4.23				2 / B			2 / B		2 / B		2 / B			
4.24		b ₃	mm	1040 / 730			1040 / 730		880 / 650		880 / 650			
4.25		b ₅	mm	620			620		620		620			
4.26		b ₄	mm	914			914		914		914			
4.28		l ₄	mm	680	625	552	697	626	586		771			
4.31		m ₁	mm	100			100		100		100			
4.32		m ₂	mm	76			76		76		76			
4.33	A _{st}	mm	2444	2499	2572	2495	2568	2606		2614				
4.34	A _{st}	mm	2644	2699	2772	2695	2768	2806		2814				
4.35	W _a	mm	1702			1770		1770		1954				
4.37	l ₇	mm	1870			1942		1942		2126				
Performance	5.1		km / h	10.6 / 11		12 / 12*		10.4 / 11		12 / 12*		10.2 / 10.8	12 / 12*	12 / 12
	5.2		m / s	0.32 / 0.60			0.28 / 0.48		0.26 / 0.46		0.28 / 0.41			
	5.3		m / s	0.54 / 0.46			0.50 / 0.40		0.50 / 0.40		0.50 / 0.40			
	5.4		m / s	variable			variable		variable		variable			
	5.7		%	10 / 15			10 / 15		9.5 / 15*		10 / 15		9 / 15*	9 / 15
	5.8		%	10 / 15			10 / 15		9.5 / 15*		10 / 15		9 / 15*	9 / 15
5.9		s	5.6 / 4.9		5.2 / 4.6*		5.8 / 5.0		5.5 / 4.7*		6 / 5.2		5.7 / 4.9*	5.6 / 4.9
5.10			Generator / hydr.-mechan.			Generator / hydr.-mechan.		Generator / hydr.-mechan.		Generator / hydr.-mechan.				
Electric Motors	6.1		kW	5.2		6.0*		5.2		6.0*		5.2	6.0*	6.0
	6.2		kW	12.0		11.5*		12.0		11.5*		12.0	11.5*	11.5
	6.3			IEC 254-2, C			IEC 254-2, C		IEC 254-2, C		IEC 254-2, C			
	6.4		V / Ah	48 / 420 L	48 / 560 L	48 / 700L	48 / 560 L	48 / 700L	48 / 700L		48 / 700			
	6.5		kg	750	940	1120	940	1120	1120		1120			
	6.6		kWh/h	4.8		5.3 *		5.4		5.9*		5.6	6.3*	6.3
Other	8.1			electronic / stepless		3-phase current*		electronic / stepless		3-phase current*		3-phase current*		
	8.2		bar	140			140			140				
	8.3		l / min	18			18			18				
	8.4		dB(A)	70			70			70				

FM 25i / FM 12i - 25i.



Triplex masts.

Model FM 12 / FM 12i.

Mast tilt forward / backward	degrees	1 / 3	1 / 3	1 / 3	1 / 3	1 / 3	1 / 3	0,5 / 2	0,5 / 2
h1 Bauhöhe	mm	2210	2260	2310	2360	2460	2510	2610	2710
h2 Freihub (Anbaugeräte berücksichtigen)	mm	1580	1630	1680	1730	1830	1880	1980	2080
h3 Hub	mm	5090	5240	5390	5540	5840	5990	6290	6590
h4 (Anbaugeräte berücksichtigen)	mm	5720	5870	6020	6170	6470	6620	6920	7720

Model FM 14 / FM 14i and Model FM 17 / FM 17i.

Mast tilt forward / backward	degrees	1 / 3	1 / 3	0,5 / 2	0,5 / 2	0,5 / 1	0,5 / 1	0,5 / 1	0,5 / 1
h1 Closed height	mm	2250	2450	2700	2900	3200	3400	3600	3900
h2 Free lift (consider attachments)	mm	1620	1820	2070	2270	2570	2770	2970	3270
h3 Lift	mm	5150	5750	6500	7100	7825	8225	8825	9625
h4 (Consider attachments)	mm	5780	6380	7130	7730	8455	8855	9455	10255

Model FM 20 / FM 20i.

Mast tilt forward / backward	degrees	1 / 3	1 / 3	0,5 / 2	0,5 / 2	0,5 / 1	0,5 / 1	0,5 / 1	0,5 / 1
h1 Closed height	mm	2250	2450	2700	2950	3200	3400	3600	3900
h2 Free lift (consider attachments)	mm	1620	1820	2070	2320	2570	2770	2970	3270
h3 Lift	mm	4975	5575	6325	7075	7825	8225	8825	9625
h4 (Consider attachments)	mm	5605	6205	6955	7715	8255	8855	9455	10255

Model FM 20 H / FM 20i H.

Mast tilt forward / backward	degrees	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4
h1 Closed height	mm	3600	3700	3900	4000	4100	4400	4700	4900
h2 Free lift (consider attachments)	mm	2970	3070	3270	3370	3470	3770	4070	4270
h3 Lift	mm	8725	9025	9225	9525	9825	10325	10925	11525
h4 (Consider attachments)	mm	9355	9655	9855	10155	10455	10955	11555	12155

Model FM 25i.

Mast tilt forward / backward	degrees	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4	- 2 / +4
h1 Closed height	mm	2250	2450	2700	2950	3200	3400	3600	3900
h2 Free lift (consider attachments)	mm	1565	1765	2015	2265	2515	2715	2915	3215
h3 Lift	mm	4875	5475	6225	6975	7625	8225	8725	9225
h4 (Consider attachments)	mm	5560	6160	6910	7660	8310	8910	9410	9910

Other standard lift heights (intermediate heights on request)

Equipment summary.

	Manufacturer	STILL	STILL	STILL	STILL	STILL	STILL
	Manufacturer's model designation	FM N	FM	FMi	FM H	FM 20i H	FM 25i
Driver's compartment	Adjustable steering wheel position and longitudinal seat setting	●	●	●	●	●	●
	Comfortable seat with hydraulic damping	●	●	●	●	●	●
	Head cushion on leg of overhead guard	●	●	●	●	●	●
	Proportional adjustment of driver's seat and foot plate		○	○	○	○	○
	Clear view mast with optimized visibility overhead guard	●	●	●	●	●	●
	Ergonomic Joystick		●	●	●	●	●
	Individual hydraulic actuation through four individual levers		○	○	○	○	○
	Display: active operating states and service instructions	●	●	●	●	●	●
	Five (four + inching travel) driving profiles selectable by driver			●		●	●
Steering	Electric servo steering	●					
	Full electric steering 360°		●	●	●	●	●
	Full electric steering 180°		○	○	○	○	○
	Directly splined steering motor (maintenance free)		●	●	●	●	●
Mast	Triplex clear view mast with special free lift	●	●	●	●	●	●
	Mast transition damping	●	●	●	●	●	●
	Integral mast side shift with mast tilt, movement range 2 x 50 mm		○	○			
	Integral side shifter with fork tilt, movement range 2 x 100 mm	○	○	○	●	●	●
Hydraulics	Noise optimised hydraulic pump	●	●	●	●	●	●
	Auxiliary hydraulics, 1-way or 2-way UPA	○	○	○	○	○	UPA
	Proportional valve for particularly sensitive movements		●	●	●	●	●
	Facility for separate setting of the parameters for the hydraulic functions	●	●	●	●	●	●
Drive	Jolt-free, stepless acceleration up to maximum speed	●	●	●	●	●	●
	The drive motor does not move with the steering, so no load on cable links	●	●	●	●	●	●
	Monitoring devices: Integral current and temperature sensors, malfunction monitoring	●	●	●	●	●	●
	Best energy utilisation due to spur bevel gearing	●	●	●	●	●	●
	Motor torque compensation guarantees staying on track and prevents steering wheel reactions when accelerating and braking	●	●	●	●	●	●
Brake	Wear-free, generator service brake	●	●	●	●	●	●
	Hydraulic load wheel brake	○	●	●	●	●	●
	Electromagnetic disk brake as a parking brake and emergency stop		●	●	●	●	●
	Energy recovery when braking	●	●	●	●	●	●
Central controller	CAN bus technology		●	●	●	●	●
	Programming facilities for the drive, acceleration and retardation figures	●	●	●	●	●	●
	Central Service and Diagnostics interface		●	●	●	●	●
Battery	Battery extracted by mast reach movement	●	●	●	●	●	●
	Battery changing using hoist	●	●	●	●	●	●
	Battery changing using roller track	○	○	○	○	○	○
Auxiliary equipment	Additional, integral storage facilities		○	○	○	○	○
	Load wheel cover UPA	○	○	○	○	○	UPA
	FleetManager	○	○	○	○	○	○
	Cold store version -30°C	○	○	○	○	○	○
	Cold store cab	○	○	○	○	○	
	Reversed steering	○	○	○	○	○	○
	Hoist limits	○	○	○	○	○	○
	Load backrest	○	○	○	○	○	○
	Overhead guard with Makrolon cover or mesh grid	○	○	○	○	○	○
	Flashing light on overhead guard	○	○	○	○	○	○
	Working spot light	○	○	○	○	○	○
	Lift height preselection system			○		○	○
	Height indicator	○	○	○	○	○	○
	Fork camera via cable or radio	○	○	○	○	○	○
	Material Flow Management systems	○	○	○	○	○	○
Drive-in overhead guard	○	○	○	○	○	○	

● Standard ○ Option



For further information on the FM
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