



FM-X Technical Data

Driver seated reach truck

FM-X 10 (10 N)

FM-X 12 (12 N)

FM-X 14 (14 N)

FM-X 17 (17 N)

FM-X 20 (20 N)

FM-X 25



In accordance with VDI guidelines 2198, this specification sheet applies to the standard model only.
For special masts, attachments etc. specifications may vary.

Description	1.1	Manufacturer			STILL	STILL	
	1.2	Manufacturer's model designation			FM-X 10	FM-X 12	
	1.3	Drive (electric, diesel, petrol, LPG)			Electric	Electric	
	1.4	Operation (hand, pedestrian, stand-on, rider seated)			Seat	Seat	
	1.5	Load capacity	Q	kg	1000	1200	
	1.6	Load centre	c	mm	600	600	
	1.8	Load distance ¹	x	mm	239	311	
	1.9	Wheel base	y	mm	1237	1309	
	Weights	2.1	Tare weight incl. battery		kg	2872	2889
2.3		Axle load closed fork, without load, drive side/load side		kg	1806/1066	1863/1026	
2.4		Axle load extended fork, with load, drive side/load side		kg	735/3137	664/3425	
2.5		Axle load closed fork, with load, drive side/load side		kg	1483/2389	1563/2526	
Wheels track		3.1	Tyres (solid rubber, Polyurethane, air)			Polyurethane	Polyurethane
	3.2	Tyre size drive side		mm	360 x 130	360 x 130	
	3.3	Tyre size load side		mm	310 x 102	310 x 102	
	3.5	Wheels, number (x = driven) load side/drive side			2/1 x	2/1 x	
	3.6	Track width, load side	b ₁₀	mm	1140	1140	
	3.7	Track width, drive side	b ₁₁	mm	-	-	
	Basic dimensions	4.1	Mast/fork carriage tilt, forward/backward ³		°	1/3	1/3
4.2		Closed mast height	h ₁	mm	2450	2450	
4.3		Free lift	h ₂	mm	1890	1890	
4.4		Lift	h ₃	mm	5750	5750	
4.5		Extended mast height	h ₄	mm	6310	6310	
4.7		Height over OHG (cabin)	h ₆	mm	2200	2200	
4.8		Height of seat/stand	h ₇	mm	1050/550	1050/550	
4.10		Height of straddle legs/load wheel covers	h ₈	mm	330	330	
4.19		Overall length ²	l ₁	mm	2379	2379	
4.20		Length incl. fork back ²	l ₂	mm	1229	1229	
4.21		Overall width	b ₁ /b ₂	mm	1250/1220	1250/1220	
4.22		Dimension of fork teeth	s/e/l	mm	40/80/1150	40/100/1150	
4.23		Fork carriage DIN 15173, class/form A, B			2/A	2/A	
4.24		Width of fork carriage, top/bottom	b ₃	mm	850/730 GN/SS 850/650	850/730 GN/SS 850/650	
4.25		Outer fork width	b ₅	mm	600	620	
4.26		Width between straddle legs/load platform	b ₄	mm	920	920	
4.28		Forward shift ¹	l ₄	mm	458	530	
4.31		Floor clearance beneath mast with load	m ₁	mm	90	90	
4.32		Floor clearance at centre of wheel base	m ₂	mm	81	81	
4.33		Width of working aisle for 1000 x 1200 pallets crosswise ²	A _{st}	mm	2638	2654	
4.34	Width of working aisle for 800 x 1200 pallets lengthwise ²	A _{st}	mm	2709	2715		
4.35	Turning radius	W _a	mm	1468	1540		
4.37	Length incl. load wheels	l ₇	mm	1641	1713		
Performance	5.1	Driving speed	with/without load	km/h	12/12	14/14	
	5.2	Lift speed	with/without load	m/s	0.47/0.70	0.45/0.70	
	5.3	Lowering speed	with/without load	m/s	0.56/0.50	0.56/0.50	
	5.4	Shift speed ⁴	with/without load	m/s	0.15	0.15	
	5.7	Climbing capacity	with/without load	%	10/15	10/15	
	5.8	Max. climbing capacity	with/without load	%	15/20	15/20	
	5.9	Acceleration time (over 10 m)	with/without load	s	4.8/4.5	4.9/4.6	
	5.10	Operation brake			gen./hydr.,mech.	gen./hydr.,mech.	
	Electric motors	6.1	Drive motor, S2 performance 60 min		kW	6.5	6.5
		6.2	Lift motor, S3 performance 15%		kW	13	13
6.3		Battery according to IEC 254-2; A,B,C, no			IEC 254-2, C	IEC 254-2, C	
6.4		Battery voltage, nominal capacity K ₅		V/Ah	420	420	
6.5		Weight of battery ± 5% (depending on the manufacturer)		Kg	750	750	
Other	8.1	Type of steering control			Three-phase	Three-phase	
	8.2	Operating pressure for attachments		bar	140	140	
	8.3	Oil quantity for attachments		l/min	18	18	
	8.4	Noise level at driver's ear		dB (A)	68	68	

All measurements including sideshift mast or sidshift forks (carriage)

¹ Reduced in steps of 72 mm depending on the size of the battery.

² A_{st} extended in steps of 72 mm depending on the size of battery.

³ May vary according to the mast, with side shift/fork tilt 2°/4°.

⁴ Shift speed 0.13 m/s for closed mast heights h₁ = 3,600 mm and above.

In accordance with VDI guidelines 2198, this specification sheet applies to the standard model only.
For special masts, attachments etc. specifications may vary.

Description	1.1	Manufacturer			STILL	STILL
	1.2	Manufacturer's model designation			FM-X 14	FM-X 17
	1.3	Drive (electric, diesel, petrol, LPG)			Electric	Electric
	1.4	Operation (hand, pedestrian, stand-on, rider seated)			Seat	Seat
	1.5	Load capacity	Q	kg	1400	1700
	1.6	Load centre	c	mm	600	600
	1.8	Load distance ¹	x	mm	347	409
	1.9	Wheel base	y	mm	1381	1453
	Weights	2.1	Tare weight incl. battery		kg	3174
2.3		Axle load closed fork, without load, drive side/load side		kg	1998/1176	2050/1141
2.4		Axle load extended fork, with load, drive side/load side		kg	601/3973	484/4407
2.5		Axle load closed fork, with load, drive side/load side		kg	1702/2872	1791/3100
Wheels track		3.1	Tyres (solid rubber, Polyurethane, air)			Polyurethane
	3.2	Tyre size drive side		mm	360 x 130	360 x 130
	3.3	Tyre size load side		mm	310 x 102	310 x 102
	3.5	Wheels, number (x = driven) load side/drive side			2/1 x	2/1 x
	3.6	Track width, load side	b ₁₀	mm	1140	1140
	3.7	Track width, drive side	b ₁₁	mm	-	-
	Basic dimensions	4.1	Mast/fork carriage tilt, forward/backward ³		°	1/3
4.2		Closed mast height	h ₁	mm	2450	2450
4.3		Free lift	h ₂	mm	1890	1880
4.4		Lift	h ₃	mm	5750	5750
4.5		Extended mast height	h ₄	mm	6310	6320
4.7		Height over OHG (cabin)	h ₆	mm	2200	2200
4.8		Height of seat/stand	h ₇	mm	1050/550	1050/550
4.10		Height of straddle legs/load wheel covers	h ₈	mm	330	330
4.19		Overall length ²	l ₁	mm	2415	2425
4.20		Length incl. fork back ²	l ₂	mm	1265	1275
4.21		Overall width	b ₁ /b ₂	mm	1250/1220	1250/1220
4.22		Dimension of fork teeth	s/e/l	mm	40/100/1150	50/100/1150
4.23		Fork carriage DIN 15173, class/form A, B			2/A	2/A
4.24		Width of fork carriage, top/bottom	b ₃	mm	850/730 GN/SS 850/650	850/730 GN/SS 850/650
4.25		Outer fork width	b ₅	mm	620	620
4.26		Width between straddle legs/load platform	b ₄	mm	920	920
4.28		Forward shift ¹	l ₄	mm	565	633
4.31		Floor clearance beneath mast with load	m ₁	mm	90	90
4.32		Floor clearance at centre of wheel base	m ₂	mm	81	81
4.33		Width of working aisle for 1000 x 1200 pallets crosswise ²	A _{st}	mm	2699	2727
4.34	Width of working aisle for 800 x 1200 pallets lengthwise ²	A _{st}	mm	2755	2771	
4.35	Turning radius	W _a	mm	1612	1684	
4.37	Length incl. load wheels	l ₇	mm	1785	1857	
Performance	5.1	Driving speed	with/without load	km/h	14/14	14/14
	5.2	Lift speed	with/without load	m/s	0.43/0.68	0.40/0.68
	5.3	Lowering speed	with/without load	m/s	0.56/0.52	0.55/0.52
	5.4	Shift speed ⁴	with/without load	m/s	0.15	0.15
	5.7	Climbing capacity	with/without load	%	10/15	10/15
	5.8	Max. climbing capacity	with/without load	%	15/20	15/20
	5.9	Acceleration time (over 10 m)	with/without load	s	5.1/4.7	5.3/4.8
5.10	Operation brake			gen./hydr.,mech.	gen./hydr.,mech.	
Electric motors	6.1	Drive motor, S2 performance 60 min		kW	6.5	6.5
	6.2	Lift motor, S3 performance 15%		kW	13	13
	6.3	Battery according to IEC 254-2; A,B,C, no			IEC 254-2, C	IEC 254-2, C
	6.4	Battery voltage, nominal capacity K ₅		V/Ah	420	48/420
	6.5	Weight of battery ± 5% (depending on the manufacturer)		Kg	750	750
Other	8.1	Type of steering control			Three-phase	Three-phase
	8.2	Operating pressure for attachments		bar	140	140
	8.3	Oil quantity for attachments		l/min	18	18
	8.4	Noise level at driver's ear		dB (A)	68	68

All measurements including sideshift mast or sidshift forks (carriage)

¹ Reduced in steps of 72 mm depending on the size of the battery.

² A_{st} extended in steps of 72 mm depending on the size of battery.

³ May vary according to the mast, with side shift/fork tilt 2°/4°.

⁴ Shift speed 0.13 m/s for closed mast heights h₁ = 3,600 mm and above.

In accordance with VDI guidelines 2198, this specification sheet applies to the standard model only.
For special masts, attachments etc. specifications may vary.

Description	1.1	Manufacturer			STILL	STILL
	1.2	Manufacturer's model designation			FM-X 20	FM-X 25
	1.3	Drive (electric, diesel, petrol, LPG)			Electric	Electric
	1.4	Operation (hand, pedestrian, stand-on, rider seated)			Seat	Seat
	1.5	Load capacity	Q	kg	2000	2500
	1.6	Load centre	c	mm	600	600
	1.8	Load distance ¹	x	mm	409	481
	1.9	Wheel base	y	mm	1525	1669
	Weights	2.1	Tare weight incl. battery		kg	3408
2.3		Axle load closed fork, without load, drive side/load side		kg	2162/1246	2413/1406
2.4		Axle load extended fork, with load, drive side/load side		kg	501/4907	585/5734
2.5		Axle load closed fork, with load, drive side/load side		kg	1870/3538	2184/4135
Wheels track		3.1	Tyres (solid rubber, Polyurethane, air)			Polyurethane
	3.2	Tyre size drive side		mm	360 x 140	360 x 140
	3.3	Tyre size load side		mm	310 x 112	310 x 112
	3.5	Wheels, number (x = driven) load side/drive side			2/1 x	2/1 x
	3.6	Track width, load side	b ₁₀	mm	1150	1150
	3.7	Track width, drive side	b ₁₁	mm	-	-
	Basic dimensions	4.1	Mast/fork carriage tilt, forward/backward ³		°	1/3
4.2		Closed mast height	h ₁	mm	2450	2450
4.3		Free lift	h ₂	mm	1880	1828
4.4		Lift	h ₃	mm	5580	5580
4.5		Extended mast height	h ₄	mm	6150	6202
4.7		Height over OHG (cabin)	h ₆	mm	2235	2235
4.8		Height of seat/stand	h ₇	mm	1085/585	1085/585
4.10		Height of straddle legs/load wheel covers	h ₈	mm	332	332
4.19		Overall length ²	l ₁	mm	2497	2569
4.20		Length incl. fork back ²	l ₂	mm	1347	1419
4.21		Overall width	b ₁ /b ₂	mm	1270/1220	1270/1220
4.22		Dimension of fork teeth	s/e/l	mm	50/100/1150	50/120/1150
4.23		Fork carriage DIN 15173, class/form A, B			2/A	2/A
4.24		Width of fork carriage, top/bottom	b ₃	mm	850/730 GN/SS 850/650	850/730 GN/SS 850/650
4.25		Outer fork width	b ₅	mm	620	640
4.26		Width between straddle legs/load platform	b ₄	mm	920	920
4.28		Forward shift ¹	l ₄	mm	633	710
4.31		Floor clearance beneath mast with load	m ₁	mm	90	100
4.32		Floor clearance at centre of wheel base	m ₂	mm	81	81
4.33		Width of working aisle for 1000 x 1200 pallets crosswise ²	A _{st}	mm	2800	2894
4.34	Width of working aisle for 800 x 1200 pallets lengthwise ²	A _{st}	mm	2844	2923	
4.35	Turning radius	W _a	mm	1757	1900	
4.37	Length incl. load wheels	l ₇	mm	1935	2073	
Performance	5.1	Driving speed	with/without load	km/h	14/14	14/14
	5.2	Lift speed	with/without load	m/s	0.34/0.58	0.30/0.50
	5.3	Lowering speed	with/without load	m/s	0.53/0.50	0.52/0.50
	5.4	Shift speed ⁴	with/without load	m/s	0.15	0.15
	5.7	Climbing capacity	with/without load	%	10/15	10/15
	5.8	Max. climbing capacity	with/without load	%	15/20	15/20
	5.9	Acceleration time (over 10 m)	with/without load	s	5.5/5	5.5/5
5.10	Operation brake			gen./hydr.,mech.	gen./hydr.,mech.	
Electric motors	6.1	Drive motor, S2 performance 60 min		kW	6.5	6.5
	6.2	Lift motor, S3 performance 15%		kW	13	13
	6.3	Battery according to IEC 254-2; A,B,C, no			IEC 254-2, C	IEC 254-2, C
	6.4	Battery voltage, nominal capacity K ₅		V/Ah	48/560	48/700
	6.5	Weight of battery ± 5% (depending on the manufacturer)		Kg	940	1120
Other	8.1	Type of steering control			Three-phase	Three-phase
	8.2	Operating pressure for attachments		bar	140	140
	8.3	Oil quantity for attachments		l/min	18	18
	8.4	Noise level at driver's ear		dB (A)	68	68

All measurements including sideshift mast or sidshift forks (carriage)

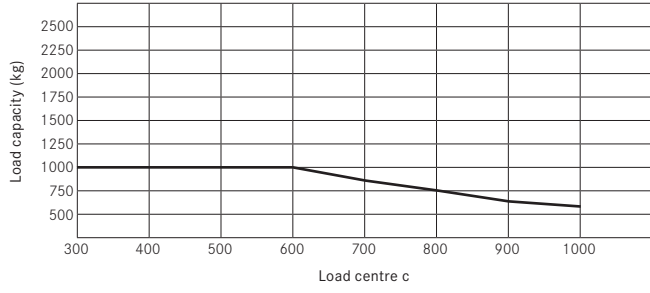
¹ Reduced in steps of 72 mm depending on the size of the battery.

² A_{st} extended in steps of 72 mm depending on the size of battery.

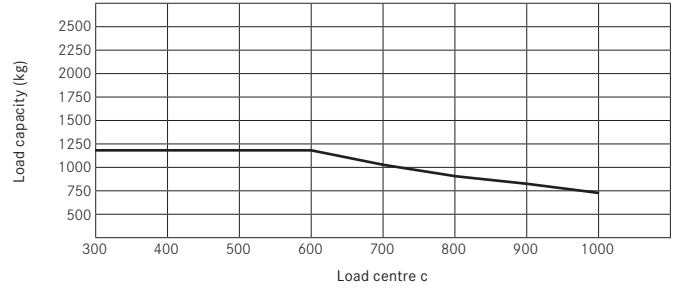
³ May vary according to the mast, with side shift/fork tilt 2°/4°.

⁴ Shift speed 0.13 m/s for closed mast heights h₁ = 3,600 mm and above.

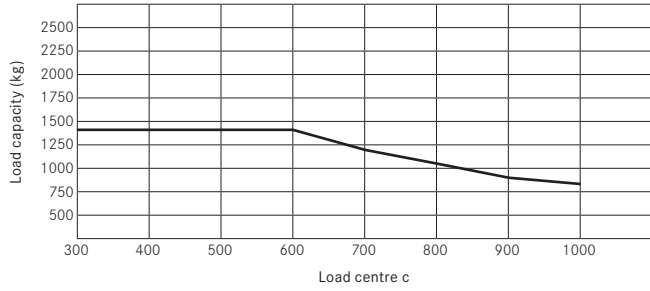
Load capacities FM-X 10 (10 N)



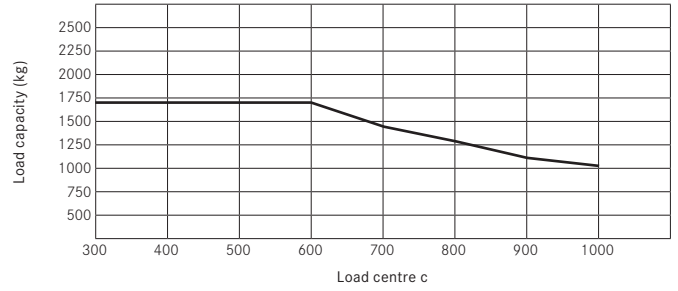
Load capacities FM-X 12 (12 N)



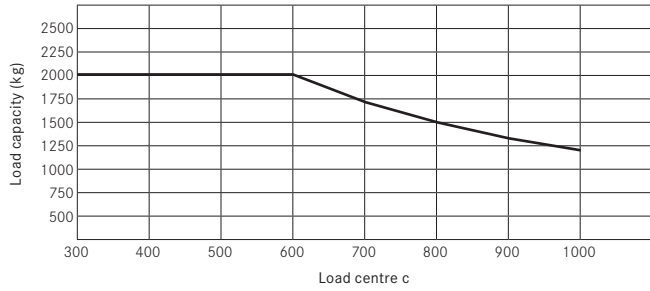
Load capacities FM-X 14 (14 N)



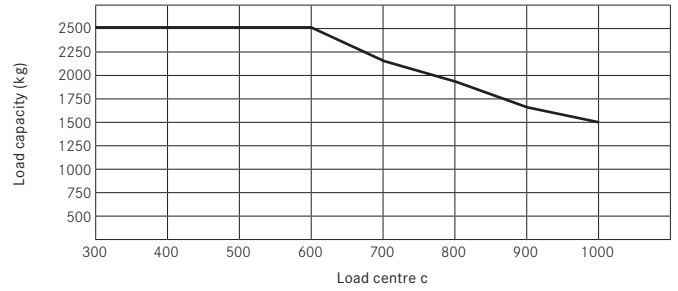
Load capacities FM-X 17 (17 N)



Load capacities FM-X 20 (20 N)



Load capacities FM-X 25



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For special masts, attachments, tyres etc. specifications may vary.

	Description			STILL	STILL	
				FM-X 10 N	FM-X 12 N	
Description	1.1	Manufacturer				
	1.2	Manufacturer's model designation				
	1.3	Drive (electric, diesel, petrol, LPG)			Electric	Electric
	1.4	Operation (hand, pedestrian, stand-on, rider seated)			Seat	Seat
	1.5	Load capacity/load	Q	kg	1000	1200
	1.6	Load centre	c	mm	600	600
	1.8	Load distance ¹	x	mm	149	221
	1.9	Wheel base	y	mm	1237	1309
	Weights	2.1	Tare weight incl. battery		kg	2825
2.3		Axle load closed fork, without load, drive side/load side		kg	1650/1175	1711/1131
2.4		Axle load extended fork, with load, drive side/load side		kg	610/3215	537/3505
2.5		Axle load closed fork, with load, drive side/load side		kg	1252/2573	1323/2719
Wheels track		3.1	Tyres (solid rubber, polyurethane, air)			Polyurethane
	3.2	Tyre size drive side		mm	360 x 130	360 x 130
	3.3	Tyre size load side		mm	310 x 102	310 x 102
	3.5	Wheels, number (x = driven) load side/drive side			2/1 x	2/1 x
	3.6	Track width, load side	b ₁₀	mm	1010	1010
	3.7	Track width, drive side	b ₁₁	mm	-	-
	Basic dimensions	4.1	Mast tilt/fork tilt forward/backward		°	2/4
4.2		Closed mast height	h ₁	mm	2450	2450
4.3		Free lift	h ₂	mm	1890	1890
4.4		Lift	h ₃	mm	5750	5750
4.5		Extended mast height	h ₄	mm	6310	6310
4.7		Height over OHG (cabin)	h ₆	mm	2200	2200
4.8		Height of seat/stand	h ₇	mm	1050/550	1050/550
4.10		Height of straddle legs/covers	h ₈	mm	330	330
4.19		Overall length ²	l ₁	mm	2469	2469
4.20		Length incl. fork back ²	l ₂	mm	1319	1319
4.21		Overall width	b ₁ /b ₂	mm	1120/1090	1120/1090
4.22		Dimension of fork teeth	s/e/l	mm	40/80/1150	40/100/1150
4.23		Fork carriage DIN 15173, class/form A, B			2A	2A
4.24		Width of fork carriage, top/bottom	b ₃	mm	850/650	850/650
4.25		Outer fork width	b ₅	mm	600	620
4.26		Width between straddle legs/load platform	b ₄	mm	790	790
4.28		Forward shift ¹	l ₄	mm	387	457
4.31		Floor clearance beneath mast with load	m ₁	mm	90	90
4.32		Floor clearance at centre of wheel base	m ₂	mm	81	81
4.33	Width of working aisle for 1000 x 1200 pallets crosswise ²	A _{st}	mm	2710	2724	
4.34	Width of working aisle for 800 x 1200 pallets lengthwise ²	A _{st}	mm	2793	2798	
4.35	Turning radius	W _a	mm	1468	1540	
4.37	Length incl. load wheels	l ₇	mm	1641	1713	
Performance	5.1	Driving speed	with/without load	km/h	12/12	14/14
	5.2	Lift speed	with/without load	m/s	0.47/0.70	0.45/0.70
	5.3	Lowering speed	with/without load	m/s	0.56/0.50	0.56/0.50
	5.4	Shift speed ³	with/without load	m/s	0.15	0.15
	5.7	Climbing capacity	with/without load	%	10/15	10/15
	5.8	max. climbing capacity	with/without load	%	15/20	15/20
	5.9	Acceleration time (over 10 m)	with/without load	s	4.8/4.5	4.9/4.6
5.10	Operation brake			gen./hydr.,mech.	gen./hydr.,mech.	
Electric motors	6.1	Drive motor, S2 performance 60 min		kW	6.5	6.5
	6.2	Lift motor, S3 performance 15%		kW	13	13
	6.3	Battery according to IEC 254-2; A,B,C, no			IEC 254-2, B	IEC 254-2, B
	6.4	Battery voltage, nominal capacity K _s		V/Ah	420	420
	6.5	Weight of battery ± 5% (depending on the manufacturer)		Kg	750	750
Other	8.1	Type of steering control			Three-phase	Three-phase
	8.2	Operating pressure for attachments		bar	140	140
	8.3	Oil quantity for attachments		l/min	18	18
	8.4	Noise level at driver's ear		dB (A)	68	68

All dimensions incl. side shift of mast or fork respectively.

¹ For larger batteries: reduced by 90 mm each, depending on the battery size.

² For larger batteries: A_{st} extends by 90 mm each, depending on the battery size.

³ For closed height above h₁=3 600 mm shift speed: 0,13 m/s

In accordance with VDI guidelines 2198, this specification sheet applies to the standard model only.
For special masts, attachments, tyres etc. specifications may vary.

Description	1.1	Manufacturer			STILL	STILL
	1.2	Manufacturer's model designation			FM-X 14 N	FM-X 17 N
	1.3	Drive (electric, diesel, petrol, LPG)			Electric	Electric
	1.4	Operation (hand, pedestrian, stand-on, rider seated)			Seat	Seat
	1.5	Load capacity/load	Q	kg	1400	1700
	1.6	Load centre	c	mm	600	600
	1.8	Load distance ¹	x	mm	266	328
	1.9	Wheel base	y	mm	1381	1453
	Weights	2.1	Tare weight incl. battery		kg	3127
2.3		Axle load closed fork, without load, drive side/load side		kg	1839/1288	1898/1246
2.4		Axle load extended fork, with load, drive side/load side		kg	475/4052	356/4488
2.5		Axle load closed fork, with load, drive side/load side		kg	1448/3079	1530/3314
Wheels track		3.1	Tyres (solid rubber, polyurethane, air)			Polyurethane
	3.2	Tyre size drive side		mm	360 x 130	360 x 130
	3.3	Tyre size load side		mm	310 x 102	310 x 102
	3.5	Wheels, number (x = driven) load side/drive side			2/1 x	2/1 x
	3.6	Track width, load side	b ₁₀	mm	1010	1010
	3.7	Track width, drive side	b ₁₁	mm	-	-
	Basic dimensions	4.1	Mast tilt/fork tilt forward/backward		°	2/4
4.2		Closed mast height	h ₁	mm	2450	2450
4.3		Free lift	h ₂	mm	1890	1880
4.4		Lift	h ₃	mm	5750	5750
4.5		Extended mast height	h ₄	mm	6310	6320
4.7		Height over OHG (cabin)	h ₆	mm	2200	2200
4.8		Height of seat/stand	h ₇	mm	1050/550	1050/550
4.10		Height of straddle legs/covers	h ₈	mm	330	330
4.19		Overall length ²	l ₁	mm	2496	2506
4.20		Length incl. fork back ²	l ₂	mm	1346	1356
4.21		Overall width	b ₁ /b ₂	mm	1120/1090	1120/1090
4.22		Dimension of fork teeth	s/e/l	mm	40/100/1150	50/100/1150
4.23		Fork carriage DIN 15173, class/form A, B			2A	2A
4.24		Width of fork carriage, top/bottom	b ₃	mm	850/650	850/650
4.25		Outer fork width	b ₅	mm	620	620
4.26		Width between straddle legs/load platform	b ₄	mm	790	790
4.28		Forward shift ¹	l ₄	mm	494	565
4.31		Floor clearance beneath mast with load	m ₁	mm	90	90
4.32		Floor clearance at centre of wheel base	m ₂	mm	81	81
4.33	Width of working aisle for 1000 x 1200 pallets crosswise ²	A _{st}	mm	2761	2788	
4.34	Width of working aisle for 800 x 1200 pallets lengthwise ²	A _{st}	mm	2829	2847	
4.35	Turning radius	W _a	mm	1612	1687	
4.37	Length incl. load wheels	l ₇	mm	1785	1857	
Performance	5.1	Driving speed	with/without load	km/h	14/14	14/14
	5.2	Lift speed	with/without load	m/s	0.43/0.68	0.40/0.68
	5.3	Lowering speed	with/without load	m/s	0.56/0.52	0.55/0.52
	5.4	Shift speed ³	with/without load	m/s	0.15	0.15
	5.7	Climbing capacity	with/without load	%	10/15	10/15
	5.8	max. climbing capacity	with/without load	%	15/20	15/20
	5.9	Acceleration time (over 10 m)	with/without load	s	5.1/4.7	5.3/4.8
5.10	Operation brake			gen./hydr.,mech.	gen./hydr.,mech.	
Electric motors	6.1	Drive motor, S2 performance 60 min		kW	6.5	6.5
	6.2	Lift motor, S3 performance 15%		kW	13	13
	6.3	Battery according to IEC 254-2; A,B,C, no			IEC 254-2, B	IEC 254-2, B
	6.4	Battery voltage, nominal capacity K _s		V/Ah	420	420
	6.5	Weight of battery ± 5% (depending on the manufacturer)		Kg	750	750
Other	8.1	Type of steering control			Three-phase	Three-phase
	8.2	Operating pressure for attachments		bar	140	140
	8.3	Oil quantity for attachments		l/min	18	18
	8.4	Noise level at driver's ear		dB (A)	68	68

All dimensions incl. side shift of mast or fork respectively.

¹ For larger batteries: reduced by 90 mm each, depending on the battery size.

² For larger batteries: A_{st} extends by 90 mm each, depending on the battery size.

³ For closed height above h₁=3 600 mm shift speed: 0,13 m/s

In accordance with VDI guidelines 2198, this specification sheet applies to the standard model only.
For special masts, attachments, tyres etc. specifications may vary.

Description	1.1	Manufacturer			STILL	
	1.2	Manufacturer's model designation			FM-X 20 N	
	1.3	Drive (electric, diesel, petrol, LPG)			Electric	
	1.4	Operation (hand, pedestrian, stand-on, rider seated)			Seat	
	1.5	Load capacity/load	Q	kg	2000	
	1.6	Load centre	c	mm	600	
	1.8	Load distance ¹	x	mm	310	
	1.9	Wheel base	y	mm	1525	
	Weights	2.1	Tare weight incl. battery		kg	3352
2.3		Axle load closed fork, without load, drive side/load side		kg	1978/1374	
2.4		Axle load extended fork, with load, drive side/load side		kg	350/5002	
2.5		Axle load closed fork, with load, drive side/load side		kg	1541/3811	
Wheels track		3.1	Tyres (solid rubber, polyurethane, air)			Polyurethane
	3.2	Tyre size drive side		mm	360 x 140	
	3.3	Tyre size load side		mm	310 x 112	
	3.5	Wheels, number (x = driven) load side/drive side			2/1 x	
	3.6	Track width, load side	b ₁₀	mm	1010	
	3.7	Track width, drive side	b ₁₁	mm	-	
	Basic dimensions	4.1	Mast tilt/fork tilt forward/backward		°	2/4
4.2		Closed mast height	h ₁	mm	2450	
4.3		Free lift	h ₂	mm	1880	
4.4		Lift	h ₃	mm	5580	
4.5		Extended mast height	h ₄	mm	6150	
4.7		Height over OHG (cabin)	h ₆	mm	2200	
4.8		Height of seat/stand	h ₇	mm	1050/550	
4.10		Height of straddle legs/covers	h ₈	mm	330	
4.19		Overall length ²	l ₁	mm	2596	
4.20		Length incl. fork back ²	l ₂	mm	1446	
4.21		Overall width	b ₁ /b ₂	mm	1120/1090	
4.22		Dimension of fork teeth	s/e/l	mm	50/100/1150	
4.23		Fork carriage DIN 15173, class/form A, B			2A	
4.24		Width of fork carriage, top/bottom	b ₃	mm	850/650	
4.25		Outer fork width	b ₅	mm	620	
4.26		Width between straddle legs/load platform	b ₄	mm	790	
4.28		Forward shift ¹⁾	l ₄	mm	547	
Performance		5.1	Driving speed	with/without load	km/h	14/14
		5.2	Lift speed	with/without load	m/s	0.34/0.58
	5.3	Lowering speed	with/without load	m/s	0.53/0.50	
	5.4	Shift speed ³⁾	with/without load	m/s	0.15	
	5.7	Climbing capacity	with/without load	%	10/15	
	5.8	max. climbing capacity	with/without load	%	15/20	
	5.9	Acceleration time (over 10 m)	with/without load	s	5.5/5	
	5.10	Operation brake			gen./hydr., mech.	
	Electric motors	6.1	Drive motor, S2 performance 60 min		kW	6.5
		6.2	Lift motor, S3 performance 15%		kW	13
6.3		Battery according to IEC 254-2; A,B,C, no			IEC 254-2, B	
6.4		Battery voltage, nominal capacity K _s		V/Ah	560	
6.5		Weight of battery ± 5% (depending on the manufacturer)		Kg	940	
Other	8.1	Type of steering control			Three-phase	
	8.2	Operating pressure for attachments		bar	140	
	8.3	Oil quantity for attachments		l/min	18	
	8.4	Noise level at driver's ear		dB (A)	68	

All dimensions incl. side shift of mast or fork respectively.

¹ For larger batteries: reduced by 90 mm each, depending on the battery size.

² For larger batteries: A_{st} extends by 90 mm each, depending on the battery size.

³ For closed height above h₁=3 600 mm shift speed: 0,13 m/s

Driver's compartment.

- Spacious driver's compartment with adjustable controls. The driver is always inside the contour of the vehicle for maximum safety.
- Damped driver's compartment (optional) reduces shocks from uneven floors and therefore the likelihood of back injuries.
- Proportional adjustment of seat and footplate (optional), electrically controlled. Ergonomic control layout ensures an optimum all-round view regardless of the driver's physique.
- Comfortable, tilting seat with multiple adjustment to suit individual drivers, plus tilting mast, enable a good view of the load while reducing the potential for neck injuries.
- Open access steps allow easy entry and exit.
- Large individual storage compartments, DIN A4 document compartment, bottle holder.
- Overhead guard designed for 360 ° visibility and maximum safety.

Controls.

- Ergonomic joystick allows operation of all hydraulic movements without changing grip; integrated buttons control auxiliary hydraulics; stick weighted to enable the driver to "feel" the driving direction; all movements can be operated simultaneously; maintenance-free sensor technology.
- Optional 4-lever control of hydraulic functions.
- Full electric 360° steering (optional 180°) for smooth, precise positioning. The number of revolutions for a 360° steering angle can be set to suit the driver or the conditions in the warehouse.
- Direct-drive safety steering system.
- Self-centring steering for stable, fatigue-free straight-line travel at all speeds.

Drives.

- Powerful maintenance-free drives for driving, lifting and steering, with energy recovery during braking.
- Fully encapsulated AC drives, which provide powerful acceleration and regenerative braking, are protected against dust and water ingress.

Hydraulics.

- Proportional valve technology for silent, fast and sensitive movements.
- Noise-optimised pump drive with improved efficiency.
- Automatic fork and side shift centering at the press of a button (optional). Immediate centering ensures the safe alignment of a pallet between the load wheels and horizontal positioning of the forks, especially with height pre-selection systems.
- High throughput of goods is provided by fast, safe working speeds for lifting/lowering, mast shift forwards, sideways and tilt.
- Shift measuring system allows soft and variable speed transitions.
- Single valve block and power chain with hydraulic quick-locks mean low service and maintenance costs.

Mast.

- Triplex free view mast with free lift; special profiles with high torsion resistance. Routing chains and pipes within the contour of the cylinders allows maximum visibility through the mast.
- Standard mast side shift with free-view fork carriage. Absence of hydraulic pipes provides greater visibility and also makes for easier serviceability. The mast tilt moves the centre of gravity towards the truck.
- Optional integrated side shift with fork tilt for less movement of loads at high lift heights.
- The narrow construction of the mast allows optimum view around the load.
- End of reach damping minimises mast transition noise.

Brake system.

- Maintenance-free regenerative braking with energy recovery and high efficiency.
- Maximum safety by 3-circuit brake system. Regenerative braking when releasing the accelerator pedal. When operating the brake pedal additional regenerative deceleration is activated. If the pedal is pressed further the hydraulic load wheel brake is actuated.
- Electromagnetic disc brake for emergency stop and parking.

Electrical equipment.

- LCD display with automatic brightness adjustment. Clear, user-friendly display of all operating states. Indicator wizard for height pre-selection assists the driver and helps safely increase throughput when stacking and retrieving.
- Truck control with five drive programs. Driving speed, acceleration and braking characteristics can be set independently for each driving direction, and also to suit the driver or the conditions in the warehouse.
- Lift height indication, lift height pre-selection and camera systems all contribute to an efficient warehousing process and help increase the throughput of goods.
- FleetManager or PIN code system and optional keyless access provide an overview of the operation of the fleet and prevent unauthorised use of the vehicle.
- Electrical and mechanical interfaces for easy retro-fitting of warehouse administration and truck control systems.

Battery.

- Exchange by hoist or, optionally, laterally with roller conveyor¹.
- High performance reserve for single and multi-shift operations due to battery capacities up to 930 Ah.
- Intelligent battery management limits the maximum current when lifting and ensures a long service life of the battery.

Service.

- Easy removal of the covers to allow best access for service.
- Simple diagnostics and parameterisation.
- Extended diagnostics via central interface.

Safety.

- CSC (Curve Speed Control) automatically reduces speed on bends to ensure maximum safety when being operated by inexperienced drivers or handling fragile loads.
- OPTISPEED system (optional) governs the lift and lower speeds to the maximum safe rate for the load weight and operating height: uncomfortable, stepped speed changes as the mast rises are done away with, the truck always operates at optimum performance, and realisable gains in productivity are achieved. Extended OPTISPEED packages are available which further adapt truck functions to warehouse conditions.
- The trucks are built in accordance with the EC machinery guideline 98/37/EG and are CE labelled.
- STILL is certified to ISO-9001.

¹ Exchange of battery by hoist, for N-type models depends on load capacity and dimension of the tray

		FM-X										
		10	12	14	17	20	25	10N	12N	14N	17N	20N
Driver's space	Adjustable position of the steering wheel and horizontal adjustment of the seat	●	●	●	●	●	●	●	●	●	●	●
	Comfort seat with hydraulic damping and weight adjustment	●	●	●	●	●	●	●	●	●	●	●
	Comfort tilt seat	○	○	○	○	○	○	-	-	-	-	-
	Damped driver's compartment for best comfort on uneven floors and thresholds	○	○	○	○	○	○	-	-	-	-	-
	Heated seat	○	○	○	○	○	○	○	○	○	○	○
	Imitation leather seat with vinyl upholstery	○	○	○	○	○	○	○	○	○	○	○
	Proportional adjustment of the seat and foot plate	○	○	○	○	○	○	-	-	-	-	-
	Free view mast with view optimised over head guard	●	●	●	●	●	●	●	●	●	●	●
	Joystick (hydraulic control without changing grip)	●	●	●	●	●	●	●	●	●	●	●
	Fingertip (hydraulic control with 4 levers)	○	○	○	○	○	○	○	○	○	○	○
	5 driving profiles, selectable by the driver	●	●	●	●	●	●	●	●	●	●	●
	Integrated storage compartments, bottle holder	●	●	●	●	●	●	●	●	●	●	●
Display: clear display of the current status	●	●	●	●	●	●	●	●	●	●	●	
Steering	Full electric 360° steering	●	●	●	●	●	●	●	●	●	●	●
	Full electric 180° steering	○	○	○	○	○	○	○	○	○	○	○
	Full electric steering with reverse function	○	○	○	○	○	○	○	○	○	○	○
	Redundant safety system for steering	●	●	●	●	●	●	●	●	●	●	●
Mast	Triplex free view mast with free lift	●	●	●	●	●	●	●	●	●	●	●
	Hydraulic mast side shift with mast tilt	●	●	●	●	●	●	-	-	-	-	-
	Hydraulic side shift with fork tilt	-	○	○	○	○	○	●	●	●	●	●
	Mast transition damping	●	●	●	●	●	●	●	●	●	●	●
	Free view fork carriage	●	●	●	●	●	●	●	●	●	●	●
Hydraulics	Noise optimised hydraulic pump	●	●	●	●	●	●	●	●	●	●	●
	Additional hydraulics, single or double	-	-	○	○	○	○	-	-	○	○	○
	Proportional valve technology for sensitive movements	●	●	●	●	●	●	●	●	●	●	●
	Individual parameterisation of the hydraulic functions	●	●	●	●	●	●	●	●	●	●	●
Drives	Simultaneous movement of several hydraulic functions	●	●	●	●	●	●	●	●	●	●	●
	Stepless acceleration up to the maximum speed	●	●	●	●	●	●	●	●	●	●	●
	Maintenance-free drives for driving, lift and steering	●	●	●	●	●	●	●	●	●	●	●
	Fully capsulated components protected against dirt and dust	●	●	●	●	●	●	●	●	●	●	●
Brakes	Integrated current and temperature sensors monitoring the functions	●	●	●	●	●	●	●	●	●	●	●
	Regenerative brake system	●	●	●	●	●	●	●	●	●	●	●
	Energy recuperation when braking	●	●	●	●	●	●	●	●	●	●	●
Additional safety and performance	Hydraulic load wheel brake as additional brake	●	●	●	●	●	●	●	●	●	●	●
	Electromagnetic disc brake as parking brake and for emergency stops	●	●	●	●	●	●	●	●	●	●	●
	Keyless PIN-Code access with button	○	○	○	○	○	○	○	○	○	○	○
	Flash light	○	○	○	○	○	○	○	○	○	○	○
	360° light	○	○	○	○	○	○	○	○	○	○	○
	Spot lights	○	○	○	○	○	○	○	○	○	○	○
	Macrolon or mesh wire OHG cover	○	○	○	○	○	○	○	○	○	○	○
	Steering angle controlled speed reduction	○	○	○	○	○	○	○	○	○	○	○
	Lift switch-off for intermediate lift and/or lift end position	○	○	○	○	○	○	○	○	○	○	○
	Lift height indication	-	○	○	○	○	○	-	○	○	○	○
	Lift height pre-selection	-	○	○	○	○	○	-	-	○	○	○
	FleetManager: access control	○	○	○	○	○	○	○	○	○	○	○
	OPTISPEED: Lift height and load controlled speed reduction	○	○	○	○	○	○	○	○	○	○	○
	Energy recuperation lowering	-	-	○	○	○	○	-	-	○	○	○
	Acoustic travel warning (Digisound)	○	○	○	○	○	○	○	○	○	○	○
	Battery system	Battery exchange by hoist	●	●	●	●	●	● ¹	● ¹	● ¹	● ¹	● ¹
Battery conveyor for lateral exchange of battery		○	○	○	○	○	○	○	○	○	○	○
Tray for 420 Ah battery		●	●	●	●	-	-	●	●	●	●	-
Tray for 560 Ah battery		○	○	○	○	●	-	○	○	○	○	●
Tray for 700 Ah battery		-	-	○	○	○	●	-	-	○	○	○
Tray for 900 Ah battery		-	-	-	-	○	○	-	-	-	-	○
Additional equipment	Battery transport and exchange rack	○	○	○	○	○	○	○	○	○	○	○
	Different fork lengths	○	○	○	○	○	○	○	○	○	○	○
	Preparation data terminal	○	○	○	○	○	○	○	○	○	○	○
	Automatic Fork tilt and side shift centring on pressing a button	-	○	○	○	○	○	-	○	○	○	○
	Cold storage version	○	○	○	○	○	○	○	○	○	○	○
	Cold storage package	-	○	○	○	○	○	-	○	○	○	○
	Heated comfort cold storage cabin	-	○	○	○	○	-	-	-	-	-	-
	Heated comfort cold storage cabin, drive in version	-	-	-	-	-	-	-	-	○	○	○
	Track width 1650/1670 mm	-	-	○	○	○	○	-	-	-	-	-
	Load rest	○	○	○	○	○	○	○	○	○	○	○
	Panoramic rear view mirror	○	○	○	○	○	○	○	○	○	○	○
	Overhead guards for drive-in racks	○	○	○	○	○	○	○	○	○	○	○
	Lateral guide rollers for drive-in racks	○	○	○	○	○	○	○	○	○	○	○
	Load wheel covers	○	○	○	○	○	○	○	○	○	○	○
Shift and lowering lock	○	○	○	○	○	○	○	○	○	○	○	
Fork tooth camera system	-	○	○	○	○	○	-	-	○	○	○	
Two-pedal version	○	○	○	○	○	○	○	○	○	○	○	

● Standard ○ Option

¹ Exchange by hoist depends on the tray dimension





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