

## FM-X Technical Data

### Driver Seated Reach Truck

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- FM-X 10/Li-Ion
- FM-X 10 iGo systems
- FM-X 12/Li-Ion
- FM-X 12 iGo systems
- FM-X 14/Li-Ion
- FM-X 14 iGo systems
- FM-X 17/Li-Ion
- FM-X 17 iGo systems
- FM-X 20/Li-Ion
- FM-X 20 iGo systems
- FM-X 25/Li-Ion
- FM-X 25 iGo systems



**iGo systems**

first in intralogistics





				STILL	STILL	STILL	STILL	STILL	STILL	STILL	STILL	
				FM-X 10/Li-Ion	FM-X 10 N	FM-X 12/Li-Ion	FM-X 12 N	FM-X 14/Li-Ion	FM-X 14 N	FM-X 14 W/Li-Ion	FM-X 14 EW/Li-Ion	
Features	1.1	Manufacturer										
	1.2	Manufacturer's type designation										
	1.3	Drive		Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	
	1.4	Operator type		Seated	Seated	Seated	Seated	Seated	Seated	Seated	Seated	
	1.5	Rated capacity/rated load		Q	kg	1000	1000	1200	1200	1400	1400	1400
	1.6	Load capacity at load centre distance		c	mm	600	600	600	600	600	600	600
	1.8	Load centre distance <sup>1</sup>		x	mm	278	184	278	184	348	335	276
	1.9	Wheel base		y	mm	1275	1275	1275	1275	1381	1453	1381
	2.1	Service weight (incl. battery)			kg	3230	3200	3240	3210	3470	3430	3700
Weights	2.3	Axle load, unladen			kg	2040/1190	1970/1230	2130/1100	1970/1230	2250/1220	2120/1310	2290/1410
	2.4	Axle load, fork advanced, laden			kg	960/3270	920/3280	850/3580	920/3280	850/4010	860/3970	960/1410
	2.5	Axle load, fork retracted, laden			kg	1730/2500	1590/2610	1820/2610	1590/2610	1950/2910	1770/3060	1920/3180
Tyres/chassis	3.1	Tyres				Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	
	3.2	Tyre size drive end			mm	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130	
	3.3	Tyre size load end			mm	Ø 285 x 100	Ø 285 x 100	Ø 285 x 100	Ø 285 x 100	Ø 285 x 100	Ø 285 x 100	
	3.5	Number of wheels (x = driven)				1x/2	1x/2	1x/2	1x/2	1x/2	1x/2	1x/2
	3.7	Tread load end		b <sub>11</sub>	mm	1167	1037	1167	1037	1167	1037	1367
	4.1	Tilt of mast/fork carriage forward/backward <sup>3</sup>			°	1/3	2/4	1/3	2/4	1/3	2/4	1/3
	4.2	Height mast lowered		h <sub>1</sub>	mm	2450	2450	2450	2450	2450	2450	2450
Dimensions	4.3	Free lift		h <sub>2</sub>	mm	1890	1890	1890	1890	1890	1890	
	4.4	Lift		h <sub>3</sub>	mm	5750	5750	5750	5750	5750	5750	
	4.5	Height mast extended		h <sub>4</sub>	mm	6310	6310	6310	6310	6310	6310	
	4.7	Height of overhead guard (cabin) <sup>4</sup>		h <sub>6</sub>	mm	2200 (iGo systems 2500)	2200	2200 (iGo systems 2500)	2200	2200 (iGo systems 2500)	2200	2200
	4.8	Seat height		h <sub>7</sub>	mm	1140	1140	1140	1140	1140	1140	1140
	4.10	Height of wheel arms		h <sub>8</sub>	mm	308	308	308	308	308	308	308
	4.19	Overall length <sup>2, 5, 6</sup>		l <sub>1</sub>	mm	2366	2462	2366	2462	2402	2488	2474
	4.20	Length to face of forks <sup>2, 5, 6</sup>		l <sub>2</sub>	mm	1216	1312	1216	1312	1252	1338	1324
	4.21	Overall width		b <sub>1</sub> /b <sub>2</sub>	mm	1270 (iGo systems 1440)	1140	1270 (iGo systems 1440)	1140	1270 (iGo systems 1440)	1140	1470
	4.22	Fork dimensions DIN ISO 2331		s/e/l	mm	40/80/1150	40/80/1150	40/100/1150	40/100/1150	40/100/1150	40/100/1150	40/100/1150
	4.23	Fork carriage ISO 2328, class/type A, B				2/A	2/A	2/A	2/A	2/A	2/A	2/A
	4.24	Fork carriage width		b <sub>3</sub>	mm	760	760	760	760	760	760	760
	4.25	Distance between fork arms min./max.		b <sub>5</sub>	mm	296/600	296/600	296/600	296/600	316/620	316/620	316/620
	4.26	Distance between wheel arms/loading surfaces		b <sub>4</sub>	mm	920	790	920	790	920	790	1120
	4.28	Reach distance		l <sub>4</sub>	mm	449	364	449	364	529	515	457
	4.31	Ground clearance, laden, below mast		m <sub>1</sub>	mm	70	70	70	70	70	70	70
	4.32	Ground clearance, centre of wheel base		m <sub>2</sub>	mm	70	70	70	70	70	70	70
	4.34.1	Aisle width for pallets 1000 x 1200 crossways <sup>2</sup>		A <sub>st</sub>	mm	2679 (iGo systems 3000 <sup>7</sup> )	2733	2679 (iGo systems 3000 <sup>7</sup> )	2733	2727 (iGo systems 3000 <sup>7</sup> )	2787	2821
	4.34.2	Aisle width for pallets 800 x 1200 lengthways <sup>2</sup>		A <sub>st</sub>	mm	2746 (iGo systems 3150 <sup>7</sup> )	2812	2746 (iGo systems 3150 <sup>7</sup> )	2812	2782 (iGo systems 3150 <sup>7</sup> )	2845	2887
	4.35	Turning radius		W <sub>a</sub>	mm	1540	1520	1540	1520	1640	1691	1680
	4.37	Length across wheel arms		l <sub>7</sub>	mm	1639	1641	1639	1641	1745	1817	1745
4.43	Step height			mm	345	345	345	345	345	345	345	
Performance data	5.1	Travel speed laden/unladen			km/h	14/14 (iGo systems 6/6)	14/14	14/14 (iGo systems 6/6)	14/14	14/14 (iGo systems 6/6)	14/14	
	5.1.1	Travel speed backwards laden/unladen			km/h	14/14	14/14	14/14	14/14	14/14	14/14	
	5.2	Lifting speed laden/unladen			m/s	0.47/0.70	0.47/0.70	0.47/0.70	0.47/0.70	0.45/0.68	0.45/0.68	
	5.3	Lowering speed laden/unladen			m/s	0.56/0.50	0.56/0.50	0.56/0.50	0.56/0.50	0.56/0.52	0.56/0.52	
	5.4	Reaching speed laden/unladen			m/s	0.18	0.18	0.18	0.18	0.18	0.18	
	5.7	Gradeability laden/unladen			%	10/15	10/15	10/15	10/15	10/15	10/15	
	5.8	Max. gradeability laden/unladen			%	15/20	15/20	15/20	15/20	15/20	15/20	
	5.9	Acceleration time (over 10 m) laden/unladen			s	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	
	5.10	Service brake				Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic
Electric engine	6.1	Drive motor rating S2 = 60 min			kW	6.5	6.5	6.5	6.5	6.5	6.5	
	6.2	Lift motor rating S3 = 15 %			kW	14	13	14	14	14	14	
	6.3	Battery according to DIN 43531/35/36 A, B, C, no				43531 C/254-2	43531 B/254-2	43531 C/254-2	43531 B/254-2	43531 C/254-2	43531 C/254-2	
	6.4	Battery voltage/nominal capacity K <sub>s</sub>			V/Ah	48/465 Li-Ion: 48/204	48/465	48/465 Li-Ion: 48/204	48/465	48/465	48/620 Li-Ion: 48/204	48/620 Li-Ion: 48/204
	6.5	Battery weight (depending on manufacturer ±5 %)			kg	750	750	750	750	750	940	
	6.6	Energy consumption according to VDI cycle			kWh/h	2.88	2.88	3.23	3.23	3.40	3.40	3.40
Misc.	10.1	Operating pressure for attachments			bar	200	200	200	200	200	200	
	10.2	Oil volume for attachments			l/min	20	20	20	20	20	20	
	10.7	Sound pressure level at driver's seat			dB(A)	69	69	69	69	69	69	

All measurements including sideshift mast or sideshift forks (carriage)

<sup>1</sup> Values decrease by 72 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
Values decrease by 90 mm per battery size for larger batteries. Applies to the FM-X N

<sup>2</sup> Aisle width for pallet 1000 x 1200 crosswise:  
- Values increase by 56 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
- Values increase by 74 mm per battery size for larger batteries. Applies to the FM-X N

Aisle width for pallet 800 x 1200 lengthwise:  
- Values increase by 66 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
- Values increase by 85 mm per battery size using larger batteries. Applies to the FM-X N

<sup>3</sup> May vary according to the mast, with sideshift/fork tilt 2°/4°

<sup>4</sup> With optional cabin/wind protection, height h<sub>6</sub> is 2180 mm

<sup>5</sup> With optional cabin, length will be extended by 150 mm

<sup>6</sup> Increases in steps of 72 mm for each larger battery size for FM-X, FM-X W, FM-X EW models  
Increases in steps of 90 mm for each larger battery size for FM-X N model

<sup>7</sup> Based on smallest battery tray. An additional reduction of up to 150 mm is subject to detailed investigation

FM-X Driver Seated Reach Truck  
Precision at the Highest Level

This specification sheet, which conforms to VDI guideline 2198, provides the technical values for the standard equipment only. Different tyres, other masts, the use of accessories, etc., may result in other values.



				STILL	STILL	STILL	STILL	STILL	STILL			
Features	1.1	Manufacturer										
	1.2	Manufacturer's type designation			<b>FM-X 17/Li-Ion</b>	<b>FM-X 17 N</b>	<b>FM-X 17 W/Li-Ion</b>	<b>FM-X 17 EW/Li-Ion</b>	<b>FM-X 20/Li-Ion</b>	<b>FM-X 20 N</b>		
	1.3	Drive			Electric	Electric	Electric	Electric	Electric	Electric		
	1.4	Operator type			Seated	Seated	Seated	Seated	Seated	Seated		
	1.5	Rated capacity/rated load		Q	kg	1700	1700	1700	2000	2000		
	1.6	Load capacity at load centre distance		c	mm	600	600	600	600	600		
	1.8	Load centre distance <sup>1</sup>		x	mm	410	325	338	338	410	307	
	1.9	Wheel base		y	mm	1453	1453	1453	1453	1525	1525	
	2.1	Service weight (incl. battery)			kg	3470	3500	3740	3790	3820	3830	
Weights	2.3	Axle load, unladen		drive end/load end	kg	2290/1180	2220/1280	2390/1350	2440/1350	2450/1380		
	2.4	Axle load, fork advanced, laden		drive end/load end	kg	730/4440	670/4520	900/4550	950/4550	820/5000	830/5010	
	2.5	Axle load, fork retracted, laden		drive end/load end	kg	2030/3140	1850/3340	2050/3390	2100/3390	2180/3640	2010/3820	
Tyres/chassis	3.1	Tyres				Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane		
	3.2	Tyre size		drive end	mm	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130		
	3.3	Tyre size		load end	mm	Ø 285 x 100	Ø 285 x 100	Ø 285 x 100	Ø 285 x 100	Ø 350 x 100		
	3.5	Number of wheels (x = driven)		drive end/load end		1x/2	1x/2	1x/2	1x/2	1x/2		
	3.7	Tread		load end	b <sub>11</sub>	mm	1167	1037	1367	1567	1167	1037
	4.1	Tilt of mast/fork carriage		forward/backward <sup>3</sup>	α/β	°	1/3	2/4	1/3	1/3	2/4	
	4.2	Height		mast lowered	h <sub>1</sub>	mm	2450	2450	2450	2450	2450	2450
Dimensions	4.3	Free lift			h <sub>2</sub>	mm	1880	1880	1880	1880	1880	
	4.4	Lift			h <sub>3</sub>	mm	5750	5750	5750	5580	5580	
	4.5	Height		mast extended	h <sub>4</sub>	mm	6320	6320	6320	6150	6150	
	4.7	Height of overhead guard (cabin) <sup>4</sup>			h <sub>6</sub>	mm	2200 (iGo systems 2500)	2200	2200	2200 (iGo systems 2500)	2200	
	4.8	Seat height			h <sub>7</sub>	mm	1140	1140	1140	1140	1140	
	4.10	Height of wheel arms			h <sub>8</sub>	mm	308	308	308	373	373	
	4.19	Overall length <sup>2, 5, 6</sup>			l <sub>1</sub>	mm	2412	2499	2484	2484	2589	
	4.20	Length to face of forks <sup>2, 5, 6</sup>			l <sub>2</sub>	mm	1262	1349	1334	1334	1439	
	4.21	Overall width			b <sub>1</sub> /b <sub>2</sub>	mm	1270 (iGo systems 1440)	1140	1470	1670	1270 (iGo systems 1440)	1140
	4.22	Fork dimensions		DIN ISO 2331	s/e/l	mm	50/100/1150	50/100/1150	50/100/1150	50/100/1150	50/100/1150	
	4.23	Fork carriage ISO 2328, class/type A, B					2/A	2/A	2/A	2/A	2/A	
	4.24	Fork carriage width			b <sub>3</sub>	mm	760	760	760	760	760	
	4.25	Distance between fork arms		min./max.	b <sub>5</sub>	mm	316/620	316/620	316/620	316/620	316/620	
	4.26	Distance between wheel arms/loading surfaces			b <sub>4</sub>	mm	920	790	1120	1320	920	790
	4.28	Reach distance			l <sub>4</sub>	mm	591	505	519	519	623	520
	4.31	Ground clearance, laden, below mast			m <sub>1</sub>	mm	70	70	70	70	70	
	4.32	Ground clearance, centre of wheel base			m <sub>2</sub>	mm	70	70	70	70	70	
	4.34.1	Aisle width for pallets 1000 x 1200 crossways <sup>2</sup>			A <sub>st</sub>	mm	2752 (iGo systems 3050 <sup>7</sup> )	2795	2844	2879	2820 (iGo systems 3100 <sup>7</sup> )	2879
	4.34.2	Aisle width for pallets 800 x 1200 lengthways <sup>2</sup>			A <sub>st</sub>	mm	2796 (iGo systems 3150 <sup>7</sup> )	2854	2901	2936	2864 (iGo systems 3200 <sup>7</sup> )	2941
	4.35	Turning radius			W <sub>a</sub>	mm	1710	1691	1750	1785	1778	1762
	4.37	Length across wheel arms			l <sub>7</sub>	mm	1817	1819	1817	1817	1922	1924
	4.43	Step height				mm	345	345	345	345	345	345
	Performance data	5.1	Travel speed		laden/unladen	km/h	14/14 (iGo systems 6/6)	14/14	14/14	14/14	14/14 (iGo systems 6/6)	14/14
5.1.1		Travel speed backwards		laden/unladen	km/h	14/14	14/14	14/14	14/14	14/14	14/14	
5.2		Lifting speed		laden/unladen	m/s	0.45/0.68	0.45/0.68	0.45/0.68	0.45/0.68	0.37/0.58	0.37/0.58	
5.3		Lowering speed		laden/unladen	m/s	0.55/0.52	0.55/0.52	0.56/0.52	0.56/0.52	0.53/0.50	0.53/0.50	
5.4		Reaching speed		laden/unladen	m/s	0.18	0.18	0.18	0.18	0.18	0.18	
5.7		Gradeability		laden/unladen	%	10/15	10/15	10/15	10/15	10/15	10/15	
5.8		Max. gradeability		laden/unladen	%	15/20	15/20	15/20	15/20	15/20	15/20	
5.9		Acceleration time (over 10 m)		laden/unladen	s	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	
5.10		Service brake					Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	
Electric engine	6.1	Drive motor rating S2 = 60 min			kW	6.5	6.5	6.5	6.5	6.5		
	6.2	Lift motor rating S3 = 15 %			kW	14	14	14	14	14		
	6.3	Battery according to DIN 43531/35/36 A, B, C, no				43531 C/254-2	43531 B/254-2	43531 C/254-2	43531 C/254-2	43531 C/254-2	43531 B/254-2	
	6.4	Battery voltage/nominal capacity K <sub>s</sub>			V/Ah	48/465 Li-Ion: 48/204	48/465	48/420 Li-Ion: 48/817	48/620 Li-Ion: 48/817	48/620 Li-Ion: 48/817	48/620	
	6.5	Battery weight (depending on manufacturer ±5 %)			kg	750	750	940	940	940	940	
	6.6	Energy consumption according to VDI cycle			kWh/h	3.56	3.56	3.56	3.56	3.59	3.59	
Misc.	10.1	Operating pressure for attachments			bar	200	200	200	200	200		
	10.2	Oil volume for attachments			l/min	20	20	20	20	20		
	10.7	Sound pressure level at driver's seat			dB(A)	69	69	69	69	69		

All measurements including sideshift mast or sideshift forks (carriage)

<sup>1</sup> Values decrease by 72 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
Values decrease by 90 mm per battery size for larger batteries. Applies to the FM-X N

<sup>2</sup> Aisle width for pallet 1000 x 1200 crosswise:  
- Values increase by 56 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
- Values increase by 74 mm per battery size for larger batteries. Applies to the FM-X N

Aisle width for pallet 800 x 1200 lengthwise:  
- Values increase by 66 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
- Values increase by 85 mm per battery size using larger batteries. Applies to the FM-X N

<sup>3</sup> May vary according to the mast, with sideshift/fork tilt 2°/4°

<sup>4</sup> With optional cabin/wind protection, height h<sub>6</sub> is 2180 mm

<sup>5</sup> With optional cabin, length will be extended by 150 mm

<sup>6</sup> Increases in steps of 72 mm for each larger battery size for FM-X, FM-X W, FM-X EW models  
Increases in steps of 90 mm for each larger battery size for FM-X N model

<sup>7</sup> Based on smallest battery tray. An additional reduction of up to 150 mm is subject to detailed investigation

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				STILL	STILL	STILL	STILL	STILL	STILL	
				FM-X 20 W/Li-Ion	FM-X 20 EW/Li-Ion	FM-X 20 HD/Li-Ion	FM-X 25/Li-Ion	FM-X 25 W/Li-Ion	FM-X 25 EW/Li-Ion	
Features	1.1	Manufacturer								
	1.2	Manufacturer's type designation								
	1.3	Drive		Electric	Electric	Electric	Electric	Electric	Electric	
	1.4	Operator type		Seated	Seated	Seated	Seated	Seated	Seated	
	1.5	Rated capacity/rated load		Q kg 2000	2000	2000	2500	2500	2500	
	1.6	Load capacity at load centre distance		c mm 600	600	600	600	600	600	
	1.8	Load centre distance <sup>1</sup>		x mm 410	410	482	482	482	482	
	1.9	Wheel base		y mm 1525	1525	1669	1669	1669	1669	
	2.1	Service weight (incl. battery)			kg 3870	3920	5110	4110	4140	4170
Weights	2.3	Axle load, unladen		drive end/load end	kg 2490/1380	2510/1410	3030/2080	2640/1470	2620/1520	2600/1570
	2.4	Axle load, fork advanced, laden		drive end/load end	kg 840/5030	860/5060	900/6410	810/5790	790/5840	770/5890
	2.5	Axle load, fork retracted, laden		drive end/load end	kg 2200/3670	2220/3700	2810/4500	2420/4190	2400/4240	2380/4290
Tyres/chassis	3.1	Tyres			Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	
	3.2	Tyre size		drive end	mm Ø 360 x 130	Ø 360 x 130	Ø 360 x 140	Ø 360 x 140	Ø 360 x 140	
	3.3	Tyre size		load end	mm Ø 350 x 100	Ø 350 x 100	Ø 350 x 100	Ø 350 x 100	Ø 350 x 100	
	3.5	Number of wheels (x = driven)		drive end/load end	1x/2	1x/2	1x/2	1x/2	1x/2	
	3.7	Tread		load end	b <sub>11</sub> mm 1367	1567	1167	1167	1367	1567
Dimensions	4.1	Tilt of mast/fork carriage		forward/backward <sup>3</sup>	α/β ° 1/3	1/3	2/4	1/3	1/3	
	4.2	Height		mast lowered	h <sub>1</sub> mm 2450	2450	5200	2450	2450	2450
	4.3	Free lift			h <sub>2</sub> mm 1880	1880	4578	1828	1828	1828
	4.4	Lift			h <sub>3</sub> mm 5580	5580	12500	5580	5580	5580
	4.5	Height		mast extended	h <sub>4</sub> mm 6150	6150	13122	6202	6202	6202
	4.7	Height of overhead guard (cabin) <sup>4</sup>			h <sub>6</sub> mm 2200	2200	2200 (iGo systems 2500)	2200 (iGo systems 2500)	2200	2200
	4.8	Seat height			h <sub>7</sub> mm 1140	1140	1140	1140	1140	1140
	4.10	Height of wheel arms			h <sub>8</sub> mm 373	373	373	373	373	373
	4.19	Overall length <sup>2, 5, 6</sup>			l <sub>1</sub> mm 2484	2484	2556	2556	2556	2556
	4.20	Length to face of forks <sup>2, 5, 6</sup>			l <sub>2</sub> mm 1334	1334	1406	1406	1406	1406
	4.21	Overall width			b <sub>1</sub> /b <sub>2</sub> mm 1470	1670	1270 (iGo systems 1440)	1270 (iGo systems 1440)	1470	1670
	4.22	Fork dimensions		DIN ISO 2331	s/e/l mm 50/100/1150	50/100/1150	50/120/1150	50/120/1150	50/120/1150	50/120/1150
	4.23	Fork carriage ISO 2328, class/type A, B			2/A	2/A	2/A	2/A	2/A	2/A
	4.24	Fork carriage width			b <sub>3</sub> mm 760	760	760	760	760	760
	4.25	Distance between fork arms		min./max.	b <sub>5</sub> mm 316/620	316/620	336/640	336/640	336/640	336/640
	4.26	Distance between wheel arms/loading surfaces			b <sub>4</sub> mm 1120	1320	920	920	1120	1320
	4.28	Reach distance			l <sub>4</sub> mm 623	623	695	695	695	695
	4.31	Ground clearance, laden, below mast			m <sub>1</sub> mm 70	70	70	70	70	70
	4.32	Ground clearance, centre of wheel base			m <sub>2</sub> mm 70	70	50	50	50	50
	4.34.1	Aisle width for pallets 1000 x 1200 crossways <sup>2</sup>			A <sub>st</sub> mm 2857	2892	2908 (iGo systems 3250 <sup>7</sup> )	2908 (iGo systems 3250 <sup>7</sup> )	2943	2978
	4.34.2	Aisle width for pallets 800 x 1200 lengthways <sup>2</sup>			A <sub>st</sub> mm 2901	2936	2937 (iGo systems 3300 <sup>7</sup> )	2937 (iGo systems 3300 <sup>7</sup> )	2972	3007
4.35	Turning radius			W <sub>a</sub> mm 1815	1850	1915	1915	1950	1985	
4.37	Length across wheel arms			l <sub>7</sub> mm 1922	1922	2066	2066	2066	2066	
4.43	Step height			mm 345	345	345	345	345	345	
Performance data	5.1	Travel speed		laden/unladen	km/h 14/14	14/14	14/14 (iGo systems 6/6)	14/14 (iGo systems 6/6)	14/14	14/14
	5.1.1	Travel speed backwards		laden/unladen	km/h 14/14	14/14	14/14	14/14	14/14	14/14
	5.2	Lifting speed		laden/unladen	m/s 0.37/0.58	0.37/0.58	0.34/0.50	0.34/0.50	0.34/0.50	0.34/0.50
	5.3	Lowering speed		laden/unladen	m/s 0.53/0.50	0.53/0.50	0.52/0.50	0.52/0.50	0.52/0.50	0.52/0.50
	5.4	Reaching speed		laden/unladen	m/s 0.18	0.18	0.18	0.18	0.18	0.18
	5.7	Gradeability		laden/unladen	% 10/15	10/15	10/15	10/15	10/15	10/15
	5.8	Max. gradeability		laden/unladen	% 15/20	15/20	15/20	15/20	15/20	15/20
	5.9	Acceleration time (over 10 m)		laden/unladen	s 4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0	4.5/4.0
	5.10	Service brake			Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic	Regenerative-electric/hydraulic
Electric engine	6.1	Drive motor rating S2 = 60 min			kW 6.5	6.5	6.5	6.5	6.5	
	6.2	Lift motor rating S3 = 15 %			kW 14	14	14	14	14	
	6.3	Battery according to DIN 43531/35/36 A, B, C, no			43531 C/254-2	43531 C/254-2	43531 C/254-2	43531 C/254-2	43531 C/254-2	
	6.4	Battery voltage/nominal capacity K <sub>s</sub>			V/Ah 48/620 Li-Ion: 48/817	48/620 Li-Ion: 48/817	48/775 Li-Ion: 48/817	48/775 Li-Ion: 48/817	48/775 Li-Ion: 48/817	48/775 Li-Ion: 48/817
	6.5	Battery weight (depending on manufacturer ±5 %)			kg 940	940	1120	1120	1120	1120
	6.6	Energy consumption according to VDI cycle			kWh/h 3.59	3.59	3.59	4.49	4.49	4.49
Misc.	10.1	Operating pressure for attachments			bar 200	200	200	200	200	
	10.2	Oil volume for attachments			l/min 20	20	20	20	20	
	10.7	Sound pressure level at driver's seat			dB(A) 69	69	69	69	69	

All measurements including sideshift mast or sideshift forks (carriage)

<sup>1</sup> Values decrease by 72 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
Values decrease by 90 mm per battery size for larger batteries. Applies to the FM-X N

<sup>2</sup> Aisle width for pallet 1000 x 1200 crosswise:  
- Values increase by 56 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
- Values increase by 74 mm per battery size for larger batteries. Applies to the FM-X N  
Aisle width for pallet 800 x 1200 lengthwise:  
- Values increase by 66 mm per battery size for larger batteries. Applies to the FM-X, FM-X W and FM-X EW;  
- Values increase by 85 mm per battery size using larger batteries. Applies to the FM-X N

<sup>3</sup> May vary according to the mast, with sideshift/fork tilt 2°/4°

<sup>4</sup> With optional cabin/wind protection, height h<sub>6</sub> is 2180 mm

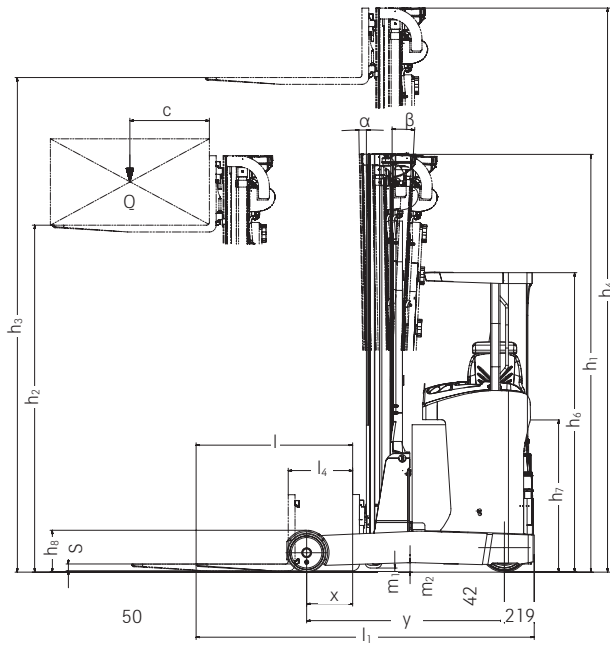
<sup>5</sup> With optional cabin, length will be extended by 150 mm

<sup>6</sup> Increases in steps of 72 mm for each larger battery size for FM-X, FM-X W, FM-X EW models  
Increases in steps of 90 mm for each larger battery size for FM-X N model

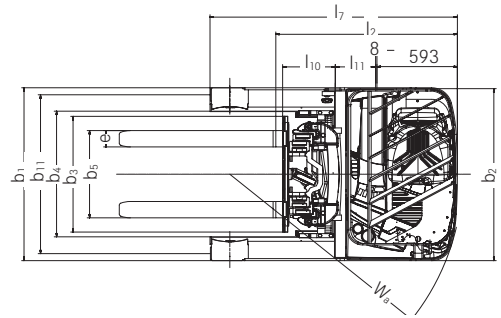
<sup>7</sup> Based on smallest battery tray. An additional reduction of up to 150 mm is subject to detailed investigation



FM-X Driver Seated Reach Truck  
 Technical Drawings



Side view



Top view



# FM-X Driver Seated Reach Truck Mast Tables



Triplex				
	Height, mast lowered h <sub>1</sub> in mm	Free lift h <sub>2</sub> in mm	Lift h <sub>3</sub> in mm	Height, mast extended h <sub>4</sub> in mm
FM-X 10/10 N - FM-X 12/12 N FM-X 14/14 N/14 W/14 EW	1950	1390	4250	4810
	2015	1455	4440	5000
	2050	1490	4550	5110
	2200	1640	5000	5560
	2250	1690	5150	5710
	2300	1740	5300	5860
	2400	1840	5600	6160
	2450	1890	5750	6310
	2500	1940	5900	6460
	2600	2040	6200	6760
2700	2140	6500	7060	
FM-X 10 N FM-X 10 FM-X 12 N FM-X 12	2800	2240	6700	7260
	2900	2340	7000	7560
FM-X 10 N FM-X 10 FM-X 12 N FM-X 12	2800	2240	6700	7360
	2900	2340	7000	7660
FM-X 14/14 N/14 W/14 EW	2800	2240	6800	7360
	2900	2340	7100	7660
	3000	2440	7400	7960
	3100	2540	7700	8260
	3200	2640	8000	8560
	3300	2740	8300	8860
	3400	2840	8600	9160
	3500	2940	8900	9460
	3600	3040	9200	9760
	3700	3140	9500	10060
3800	3240	9800	10360	
FM-X 14 N - FM-X 17 N	1950	1380	4250	4820
	2015	1445	4440	5010
	2050	1480	4550	5120
	2200	1630	5000	5570
	2250	1680	5150	5720
	2300	1730	5300	5870
	2400	1830	5600	6170
	2450	1880	5750	6320
	2500	1930	5900	6470
	2600	2030	6200	6770
	2700	2130	6500	7070
	2800	2230	6800	7370
	2900	2330	7100	7670
	3000	2430	7400	7970
	3100	2530	7700	8270
	3200	2630	8000	8570
	3300	2730	8300	8870
	3400	2830	8600	9170
	3500	2930	8900	9470
	3600	3030	9200	9770
3700	3130	9500	10070	
3800	3230	9800	10370	
3900	3330	10100 <sup>1</sup>	10670	
4200	3630	10500 <sup>1</sup>	11070	
4300	3730	10800 <sup>1</sup>	11370	
4400	3830	11100 <sup>1</sup>	11670	
4500	3930	11400 <sup>1</sup>	11970	
4700	4130	11800 <sup>1</sup>	12370	

<sup>1</sup> Lift height h<sub>3</sub> for iGo systems trucks: up to 10000 mm

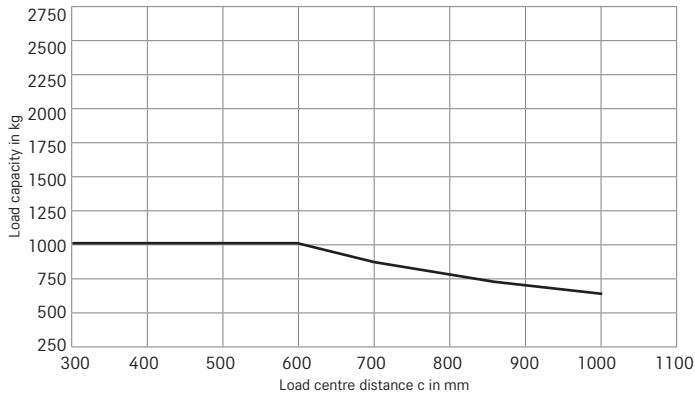
Triplex				
	Height, mast lowered h <sub>1</sub> in mm	Free lift h <sub>2</sub> in mm	Lift h <sub>3</sub> in mm	Height, mast extended h <sub>4</sub> in mm
FM-X 20/20 N/20 W/20 EW	1950	1380	4080	4650
	2015	1445	4270	4840
	2050	1480	4380	4950
	2200	1630	4830	5400
	2250	1680	4980	5550
	2300	1730	5130	5700
	2400	1830	5430	6000
	2450	1880	5580	6150
	2500	1930	5730	6300
	2600	2030	6030	6600
	2700	2130	6330	6900
	2800	2230	6630	7200
	2900	2330	6930	7500
	3000	2430	7200	7770
	3100	2530	7500	8070
	3200	2630	7800	8370
	3300	2730	8000	8570
	3400	2830	8300	8870
	3450	2880	8450	9020
	3500	2930	8600	9170
3600	3030	8900	9470	
3700	3130	9200	9770	
3800	3230	9500	10070	
3900	3330	9800	10370	
4000	3430	10100 <sup>1</sup>	10670	
4100	3530	10400 <sup>1</sup>	10970	
4200	3630	10700 <sup>1</sup>	11270	
4300	3730	11000 <sup>1</sup>	11570	
4400	3830	11300 <sup>1</sup>	11870	
4500	3930	11600 <sup>1</sup>	12170	
4650	4080	12050 <sup>1</sup>	12620	
5200	4630	12500 <sup>1</sup>	13070	
5350	4780	13000 <sup>1</sup>	13570	
FM-X 20 HD	5200	4578	12500 <sup>1</sup>	13122
	5350	4728	13000 <sup>1</sup>	13622
FM-X 25/25 W/25 EW	1950	1328	4080	4702
	2015	1393	4270	4892
	2050	1428	4380	5002
	2200	1578	4830	5452
	2250	1628	4980	5602
	2300	1678	5130	5752
	2400	1778	5430	6052
	2450	1828	5580	6202
	2500	1878	5730	6352
	2600	1978	6030	6652
	2700	2078	6330	6952
	2800	2178	6630	7252
	2900	2278	6930	7552
	3000	2378	7200	7822
	3100	2478	7500	8122
	3200	2578	7800	8422
	3300	2678	8000	8622
	3400	2778	8300	8922
	3450	2828	8450	9072
	3500	2878	8600	9222
	3600	2978	8900	9522
	3700	3078	9200	9822
	3800	3178	9500	10122
	3900	3278	9800	10422
	4000	3378	10100 <sup>1</sup>	10722
4100	3478	10400 <sup>1</sup>	11022	
4200	3578	10700 <sup>1</sup>	11322	
4300	3678	11000 <sup>1</sup>	11622	
4400	3778	11300 <sup>1</sup>	11922	
4500	3878	11600 <sup>1</sup>	12222	
4650	4028	12050 <sup>1</sup>	12672	

Masts with heights of up to 2450 mm and hydraulic mast side shift have a tilt angle of 1° forward and 3° backward.  
Masts with hydraulic side shift have a fork tilt angle of 2° forward and 4° backward or optionally 3° forward and 3° backward.

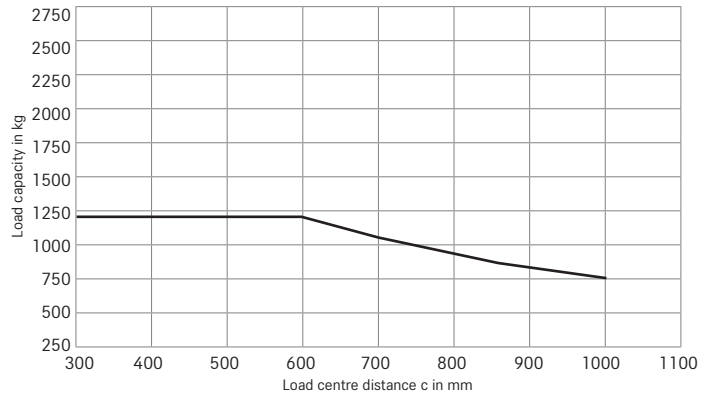
# FM-X Driver Seated Reach Truck

## Basic Load Capacities

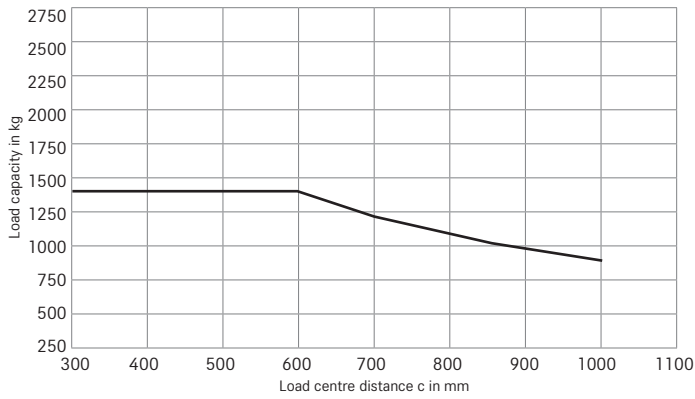
Load capacity FM-X 10/10 N



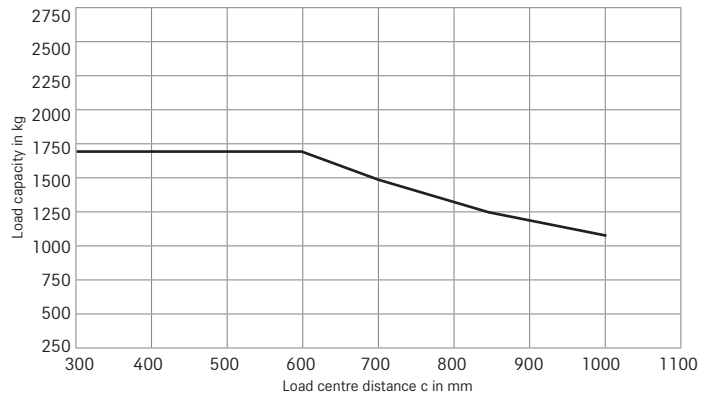
Load capacity FM-X 12/12 N



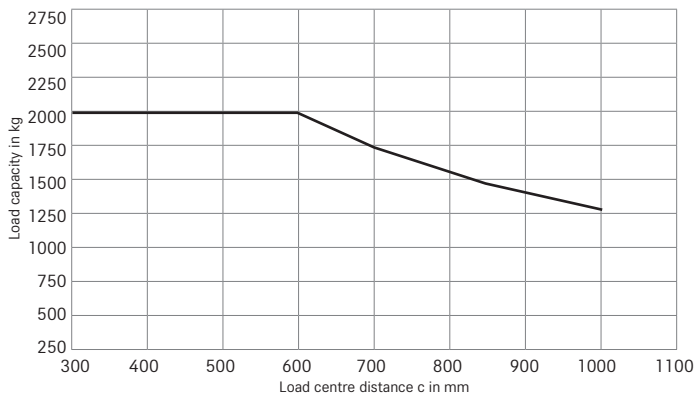
Load capacity FM-X 14/14 N/14 W/14 EW



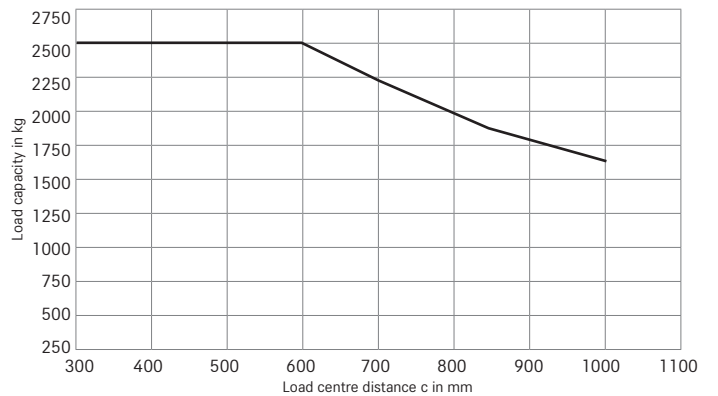
Load capacity FM-X 17/17 N/17 W/17 EW



Load capacity FM-X 20/20 N/20 W/20 EW/20 HD



Load capacity FM-X 25/25 W/25 EW





# FM-X Driver Seated Reach Truck

## Detailed Photos



Optimal view of goods thanks to unique sideshift mast



Individually adjustable driver workspace



Ergonomic and sensitive control thanks to Joystick 4Plus



Easy operation of all functions without having to change grip thanks to fingertip operation



Ergonomically optimal position thanks to proportional adjustment of seat and footplate



Relaxed view upwards and past the goods thanks to the unique comfortable reclining seat



## FM-X Driver Seated Reach Truck Precision at the Highest Level

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13 metre lift height with high residual load capacity

Active Load Stabilisation (ALS)

Holistic ergonomics concept

The FM-X is always more than just a fork ahead of the rest. Thanks to Active Load Stabilisation (ALS) you can deal with the next goods transport while others would still be waiting for the mast to stop vibrating. An automatic equalising pulse provides a fast and effective way of stopping the vibrations that occur at great heights, reducing the waiting time at the shelf by up to 80 per cent. The result is a significant increase in the rate of turnover. Furthermore, with the FM-X the available storage space can be used more efficiently than ever before; the high residual load capacity means that the reach truck can lift loads of up to 1,000 kg to an incredible height of 13 metres.

Relaxed, comfortable and safe work throughout the whole shift is guaranteed by the holistic ergonomics concept. Footplate, steering wheel, seat – all these components can be individually adjusted to match the work requirement at hand as well as the stature and preferences of the driver. The FM-X is a compact and efficient energy bundle convincing with top availability thanks to Li-Ion technology. This does not only allow opportunity charging at any time – it is also fast: 50 % of the battery is chargeable in only 30 minutes. Many other details, such as the optional tilting seat and the exclusive STILL mast side shift, for example, make the FM-X an ideal organiser in any warehouse – from operating high racks to long distance haul or replenishment.



## The 'Simply Efficient' factors: Performance attributes as a measure of economic efficiency

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### Simply easy

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- Precise height measurement with optical LED lift height sensor
- High handling capacity thanks to optional Easy Target and Easy Target Plus lift height pre-selection
- Precise control of lift functions using optional Joystick 4Plus or Fingertip controls
- Fatigue-free operation thanks to cushioned driver's seat with optional reclining mechanism
- With iGo systems trucks, further trucks can be added at any time so as to expand transportation capacity



### Simply powerful

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- Impressive goods handling thanks to residual load capacity of 1,000 kg at a height of 13 m, automated with iGo systems 10 m
- Fast goods handling due to a travel speed of up to 14 km/h, automated with iGo systems 6 km/h
- Reduced idle time due to high lowering and lifting speeds
- Excellent availability thanks to a battery capacity of up to 930 Ah
- The software-based transport controls for the FM-X iGo systems enable optimal fleet utilisation, whilst guaranteeing a high level of process reliability, traffic management, visualisation of truck movements, battery charge status monitoring and a reduced error rate – the flow of materials and information is always reliable and mapped comprehensively and transparently



### Simply safe

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- Reduced forklift mast vibrations and less damage to goods due to Active Load Stabilisation (ALS) and OptiSpeed (both optional)
- Unobstructed view upwards due to optional armoured glass roof

- Excellent visibility in the warehouse thanks to optional STILL Safety Light
- Safe cornering with (optional) Curve Speed Control based on the steering angle
- FM-X iGo systems improves transport quality and eliminates the risk of injury and damage to people, trucks, warehouse equipment and goods thanks to smart safety functions



### Simply flexible

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- Clever utilisation of space thanks to retractable mast
- Optimal comfort with a wide range of cab variants and driver workstation settings
- Suitable for a wide range of application scenarios thanks to multiple chassis variants
- iGo systems trucks can be manually operated if required: this increases flexibility, ensures smooth processes and material flows, and enables easy access to the goods



### Simply connected

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- Operator management, shock detection and controlled access with optional FleetManager 4.x
- With intelligent interface architecture, all automation solutions can communicate with external systems
- Easy integration into material flow management systems thanks to MMS provision
- Different iGo systems trucks can be combined with one another, with manual transport systems and with stationary automation systems

## FM-X Driver Seated Reach Truck FM-X iGo systems

**Safety guaranteed:** smart safety functions increase transport quality and eliminate the risk of injury and damage to people, trucks, warehouse installations and goods

**Outstanding process standards:** picking errors and empty runs are prevented, increasing the transport quality

**Maximum availability:** efficient transport control and IT integration enable optimal fleet utilisation around the clock

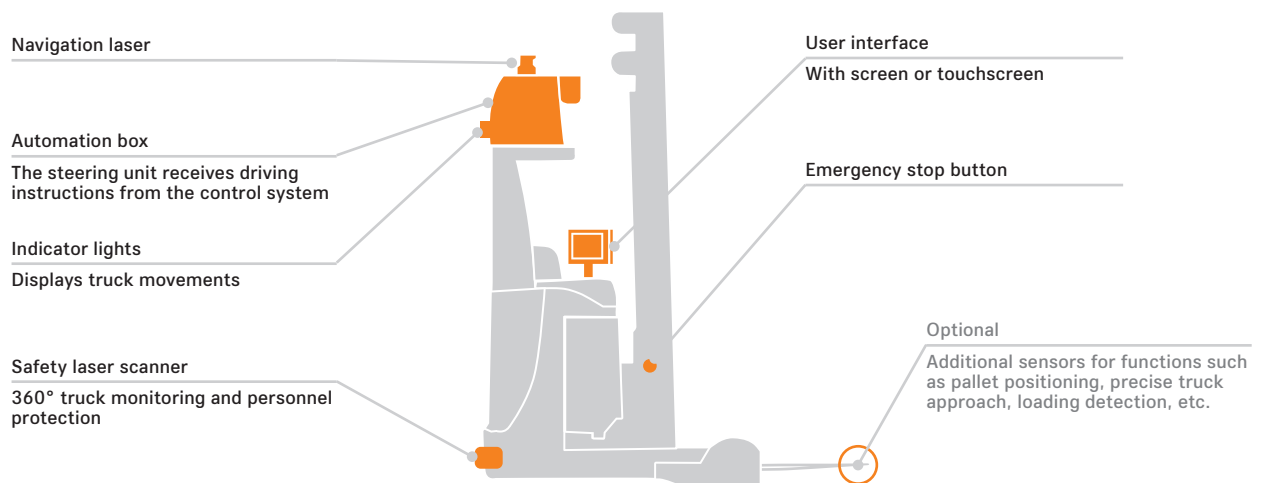
**Optimal cost-effectiveness and efficiency** thanks to individual automation concepts as well as transparent and optimised continuous material flow



### iGo systems - Automated transport solutions

STILL iGo systems enables automated interaction between one or more different trucks so that transport tasks in the warehouse can be performed without a driver. No matter what your transport task, we have the right automated truck for you. The various trucks in the iGo systems portfolio assist with incoming and outgoing goods, storage, buffering, order picking, as well as production supply and disposal. The iGo software takes over control and traffic regulation tasks, achieves effective fleet utilisation and monitors all battery charge statuses. Modern navigation technology is used to guide the trucks through the warehouse.

Personnel protection scanners ensure the highest level of safety, while suitable sensors accurately detect pallets. The fully automated STILL devices cooperate effectively with manually controlled and semi-automated transport systems. Automation kits with standardised components, controls and interfaces transform a series truck into an industrial AGV (automated guided vehicle). We offer you reliable and scalable solutions across the entire automation spectrum. With your return on investment always in mind, we will support you all the way: from conception and quoting to implementation and maintenance.



### Advantages of automated reach trucks

Automated reach trucks such as the FM-X iGo systems are a real asset for wide-aisle and block storage both horizontally and vertically. The FM-X iGo systems is characterised by optimal safety and reliability for driverless transport over long distances. It also offers decisive advantages for transport tasks that require high levels of precision in challenging conditions: The automated handling improves efficiency and process reliability - for example, when storing or removing heavy loads at great heights or when loading one-way shelves or fully automated shuttle systems. Automated reach trucks are therefore the perfect solution for current and future intralogistical challenges.

The following safety features are integrated: a safety laser scanner that detects people and objects in the path of travel; visual and acoustic warning systems (e. g. when changing direction of travel); and an emergency stop button that can be used to bring the forklift truck to an immediate standstill. However, we understand that not every technological innovation is financially feasible for the task at hand. We therefore aim to ensure that you do not get lost in the dense jungle of digital Industry 4.0 products, and offer a mix of technical solutions perfectly suited to your needs.

FM-X Driver Seated Reach Truck  
Equipment Variants



	FM-X 10	FM-X 10 N	FM-X 12	FM-X 12 N	FM-X 14/W/EW	FM-X 14 N	FM-X 17/W/EW	FM-X 17 N	FM-X 20/W/EW	FM-X 20 N	FM-X 20 HD	FM-X 25/W/EW	
Driver's seat	Amoured glass overhead guard with headrest	○	○	○	○	○	○	○	○	○	○	○	
	Steering wheel and seat adjustment	●	●	●	●	●	●	●	●	●	●	●	
	Comfortable seat with hydraulic damping and weight adjustment	●	●	●	●	●	●	●	●	●	●	●	
	Comfortable reclining seat	○	—	○	—	○	—	○	—	○	—	○	
	Cushioned driver's seat for optimum comfort on uneven surfaces and when going over bumps	○	—	○	—	○	—	○	—	○	—	○	
	Heated driver's seat	○	○	○	○	○	○	○	○	○	○	○	○
	Leatherette driver's seat	○	○	○	○	○	○	○	○	○	○	○	○
	Proportional adjustment of seat and foot plate	○	—	○	—	○	—	○	—	○	—	○	○
	Joystick operation (hydraulic control system without changing grip)	●	●	●	●	●	●	●	●	●	●	●	●
	Fingertip controls (hydraulic control system with four individual levers)	○	○	○	○	○	○	○	○	○	○	○	○
	Five driver profiles, selected according to operator	●	●	●	●	●	●	●	●	●	●	●	●
	Integrated storage facilities, cup holder	●	●	●	●	●	●	●	●	●	●	●	●
	Panoramic rear-view mirror	●	●	●	●	●	●	●	●	●	●	●	●
Display: clear display of active operating states	●	●	●	●	●	●	●	●	●	●	●	●	
Steering	Fully electric 360° steering	●	●	●	●	●	●	●	●	●	●	●	
	Fully electric 180° steering	○	○	○	○	○	○	○	○	○	○	○	
	Fully electric steering with reverse function	○	○	○	○	○	○	○	○	○	○	○	
	Redundant steering safety system	●	●	●	●	●	●	●	●	●	●	●	
Mast	Triple free view mast with free lift	○	○	○	○	○	○	○	○	○	○	○	
	Hydraulic mast for lateral shifting with mast tilt	●	—	●	—	●	—	●	—	●	—	●	
	Hydraulic sidsifter with fork tilt	○	●	○	—	○	—	○	—	○	—	○	
	Mast reach damping system	●	●	●	●	●	●	●	●	●	●	●	
Hydraulics	Free view fork carriage	●	●	●	●	●	●	●	●	●	●	●	
	Ancillary hydraulics, onefold or twofold	○	○	○	○	○	○	○	○	○	○	○	
	Proportional valve technology for sensitive movements	●	●	●	●	●	●	●	●	●	●	●	
	Individual parametrisation options for hydraulic functions	●	●	●	●	●	●	●	●	●	●	●	
Drives	Multiple hydraulic movements can be controlled simultaneously	●	●	●	●	●	●	●	●	●	●	●	
	Smooth, continuous acceleration to maximum speed	●	●	●	●	●	●	●	●	●	●	●	
	Maintenance-free drives for driving, steering and lifting	●	●	●	●	●	●	●	●	●	●	●	
	Fully enclosed component which is impervious to dirt and dust	●	●	●	●	●	●	●	●	●	●	●	
Brake	Integral current and temperature sensors for function monitoring	●	●	●	●	●	●	●	●	●	●	●	
	Generator braking system	●	●	●	●	●	●	●	●	●	●	●	
	Energy recovery when braking	●	●	●	●	●	●	●	●	●	●	●	
	Hydraulic impeller brake as additional brake	●	●	●	●	●	●	●	●	●	●	●	
Safety and performance	Electromagnetic disc brake as parking brake and emergency stop	●	●	●	●	●	●	●	●	●	●	●	
	PIN code access, keyless, with button	○	○	○	○	○	○	○	○	○	○	○	
	Indicator light	○	○	○	○	○	○	○	○	○	○	○	
	Warning light	○	○	○	○	○	○	○	○	○	○	○	
	Safety Light and Safety Light 4Plus	○	○	○	○	○	○	○	○	○	○	○	
	LED headlights	○	○	○	○	○	○	○	○	○	○	○	
	Overhead guard with Makrolon or mesh grid	○	○	○	○	○	○	○	○	○	○	○	
	Steering angle-dependent speed control	○	○	○	○	○	○	○	○	○	○	○	
	Stroke shut-off for intermediate stroke and/or end stroke limiting	○	○	○	○	○	○	○	○	○	○	○	
	Lift height display	○	○	○	○	○	○	○	○	○	○	○	
	Lift height pre-selection system Easy Target with Easy Target Plus	○	○	○	○	○	○	○	○	○	○	○	
	FleetManager: access authorisation, shock detection, reports	○	○	○	○	○	○	○	○	○	○	○	
	OPTISPEED: lift height and load-dependent speed regulation	○	○	○	○	○	○	○	○	○	○	○	
Active vibration damping of the mast	—	—	—	—	● <sup>1</sup>	○	● <sup>1</sup>	○	● <sup>1</sup>	○	● <sup>1</sup>		
Audible driving warning signal (Digisound)	○	○	○	○	○	○	○	○	○	○	○		
Maximum safety through iGo systems automation	○	○	○	○	○	○	○	○	○	○	○		
Battery system	Battery changing with crane	●	●	●	●	●	●	●	●	●	●	●	
	Battery changing from the side with roller track	○	○	○	○	○	○	○	○	○	○	○	
	Battery compartment for 420-465 Ah battery	●	●	●	●	●	●	●	●	●	●	●	
	Battery compartment for 480-620 Ah battery	○	○	○	○	○	○	○	○	○	○	○	
	Battery compartment for 600-775 Ah battery	—	—	—	—	○	○	○	○	○	○	○	
	Battery compartment for 720-930 Ah battery	—	—	—	—	—	—	—	—	○	○	○	
	204 Ah STILL Li-Ion battery	○	○	○	○	○	—	○/—/—	—	—	—	—	
	817 Ah STILL Li-Ion battery	○	○	○	○	○	—	—	—	○	○	○	
Additional equipment	Battery transport and changing frame	○	○	○	○	○	○	○	○	○	○	○	
	Various fork lengths	○	○	○	○	○	○	○	○	○	○	○	
	Preparation for data terminal	○	○	○	○	○	○	○	○	○	○	○	
	Automatic fork tilt and sidsift centring at the press of a button	○	○	○	○	○	○	○	○	○	○	○	
	Cold store version	○	○	○	○	○	○	○	○	○	○	○	
	Convenient cold store cab, ISO glazing, heated	○	—	○	—	○	—	○	—	○	—	○	
	Convenient cold store cab, VSG glazing, heated	○	—	○	—	○	—	○	—	○	—	○	
	Load backrest	○	○	○	○	○	○	○	○	○	○	○	
	Overhead guard for drive-in racks	○	○	○	○	○	○	○	○	○	○	○	
	Lateral guide wheels for drive-in operation	○	○	○	○	○	○	○	○	○	○	○	
	Impeller cover	○	○	○	○	○	○	○	○	○	○	○	
	Shift and lowering lock	○	○	○	○	○	○	○	○	○	○	○	
	Prong camera system	○	○	○	○	○	○	○	○	○	○	○	
Dual-pedal control	○	○	○	○	○	○	○	○	○	○	○		

<sup>1</sup> For fixed mast exceeding 3700 mm in height





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STILL is certified in the following areas: Quality management, occupational safety, environmental protection and energy management.



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