MX-X, MX-Q Technical data.

Order picking truck with turret head.

Order picking truck with telescopic forks.

Achieve more.

Order picking truck with turret head.

A modern, new-generation truck concept with OPTISPEED.
In a class of its own for order picking and stacking.

New-generation features:
- Modular build.
- Flexibility.
- Scaleable dimensions and performance.
- Ergonomic work place.
- High throughput of loads.
- Low energy consumption.
- Low operating costs.

Modern, efficient technology.

- CAN-bus technology means fewer sensors and less cabling for safety, flexibility and maximum availability.
- Energy recovery when braking and lowering the main hoist.
- Three-phase drives for peak performance, high efficiency and low operating costs, wear-free for higher uptime and greater throughput.
- Peak speed even when lowering auxiliary lift without load.
- Powerful low-wear hydraulics.
- Sensitive secondary movements due to proportional valve arrangement.
- Powerful and effective hoisting movements due to black and white valve technology with motor speed regulation.
- Particularly low wear due to low working pressure and integral high-pressure filter.
- Compact, rigid build for optimal utilisation of space and safe operation even at extreme heights.
- Smaller aisle widths or greater safety distances due to the turret head with integral over-reach.
- Integral height measurement system for precise positioning of the forks to ± 5 mm.
- Maximum residual capacity due to optimal matching of the truck width to the aisle width.
- Speedy, trouble-free entry into the aisle thanks to the new, adjustable mechanical rail guidance.

The mobile workplace.

- Whether stacking or order picking, ergonomics and driving comfort come as standard with STILL.
- Low, wide step for easy entry.
- Protection from draughts and noise.
- Perfect vision through the clear glass panels.
- Shock-absorbing cab concept.
- Comfortable, height-adjustable ergonomic seat for driving and order picking, which folds away to make the MX-X ideal for any task.
- Generous foot and knee space.
- Integral storage facilities complete the mobile work place.
- Adapted for Material-flow Management System.

The operating panel.

This is the interface between man and machine.

- Simple and safe handling matched to human needs and capabilities.
- All functions can be carried out individually or simultaneously, without changing grip. This imparts a comfortable feel to the controls and helps reduce stress-induced fatigue:
- Driving with hoisting/lowering.
- Simultaneous lowering of the main and auxiliary lift.
- Synchronous swivel and reach movement.
- Uncomplicated presentation of the relevant operator information via the clear display of the current truck status.
- Posture-tolerant design: the operator can move the display so as to achieve the most comfortable working position whether sitting or standing.
- Performance order picking in a stress-free and pleasurable work environment due to the compact rounded shapes.
- Material-flow Management: STILL's integrated solution means that the driver has clear space for order picking with everything necessary in view.

The mobile workplace for motivated employees: a stress-free working environment.

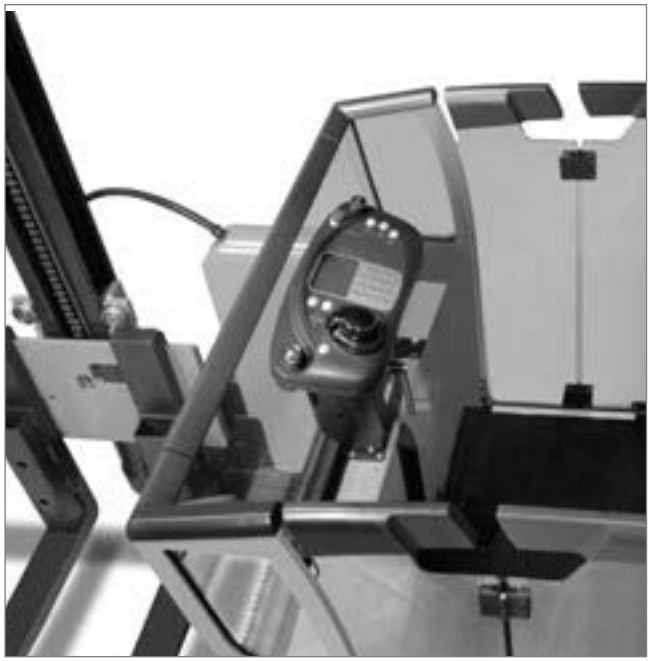
OPTISPEED Version 2.0 - the future-oriented control concept.

- The benefits of optimum performance coupled with technical innovation are maximised by OPTISPEED Version 2.0.
- Travel speed is automatically adjusted dependent on the lift height, travel direction and rate of deceleration.
- Faster load changes are achieved through automatic adjustment of the deceleration ramps. The higher the lift, the gentler the movements for spot-on positioning.
- Regulating the speeds of the various functions results in bespoke performance, tailored to the requirement of each job.
- Optimum safety due to the height-dependent ramp control of secondary movements (side shifting and fork rotation) and travel speed.
- Synchronous fork rotation as standard increases the throughput of goods both in the aisle and from the warehouse.
- With the optional load sensing and weight measurement equipment, the full potential of the MX-X can be realised, giving a further increase in performance.
- If there is a demand for heavier loads in the upper lift range, this can be achieved by adapting the truck configuration.
- Less damage to goods, equipment and truck thanks to individual adjustment of speeds, end of stroke positions, acceleration and deceleration – all to suit the specific application conditions.
- Driver-adjustable settings via the control panel leads to high levels of operator satisfaction.
- E-commerce, partial or full automation, or additional options: OPTISPEED provides for future innovation in the flow of materials.
- CAN-bus offers many possibilities which OPTISPEED utilises to the full.
- For greater functional convenience and safety, all movements are measured and monitored.
- Fast and effective configuration, diagnosis and maintenance are achieved through the central interface via a modem, or using the Service Tool Box.
- On-board diagnosis via the operating panel enables fast repair times.
- Simple programming of the main functions at the operating panel – without the need for additional tools – leads to fast and accurate commissioning.

The MX-X with OPTISPEED represents an economical warehousing concept for today and for the future – with the simple objective of giving you a competitive edge.

- up to 30% greater throughput of goods.
- up to 40% lower energy costs compared to series wound equipment.
- up to 20% lower maintenance times.
- up to 20% lower service costs.

Get on board with STILL and ensure your success for the future too.



MX-X Standard equipment.

Driver‘s cab.

- STILL’s vast experience in ergonomics and occupational medicine have contributed to the design of the driver‘s cab, which provides an ideal workplace.
- Driver‘s cab has low-vibration mountings to reduce the transmission of vibrations coming from the load.
- Tilting operating panel with display integrated into the cabin wall ensures optimal access to the controls whether standing or sitting.
- Standardised operating philosophy on all STILL narrow aisle trucks.
- Steering knob shaped for the hand allows precise truck movements. All movements are controlled by easy-grip multi-function paddles. Two-handed operation is integrated into the multi-function paddle switches. Simultaneous lowering of auxiliary lift and main lift and also diagonal travel in aisles. Impact button for Emergency Off and horn; push button for other functions.
- Padded, cloth-covered folding seat with height adjustment allows relaxed sitting when stacking and provides room to move freely when order picking.
- Cab and front end designed for adequate knee and foot clearance, while providing storage facilities.
- Glass-clear safety screens in the cab wall (optional) and hinged doors give the best view onto forks and ground - even when seated.
- Low cab entry step and split hinged doors ensure comfortable entry and exit, and also protection against draughts when driving.
- The truck will only drive when the travel switch is depressed and the cab doors are closed (deadman principle).
- Monitoring equipment prevents damage and allows planning of downtime.

Steering.

- Electrical steering acts directly on the drive through a gear. Integral steering knob on the operating panel.
- Free ranging, mechanical or inductive guidance in racking aisles, with automatic straight ahead setting of the steered drive wheel and contactless aisle recognition.

Masts.

- Telescopic mast as the ideal standard solution.
- Triplex mast with free lift where girders, door openings or overhead obstructions require a low closed mast height.
- Three point mast construction, stable and torsionally rigid for pleasant working even at extreme heights.
- High overall heights are additionally stabilised by mast bracing.

Turret head with auxiliary lift.

- A functional group with integral controller and hydraulics. Unnecessarily long connections such as cables and hydraulic hoses are avoided, increasing long-term operating safety. Diagnosis and maintenance becomes easier and faster.
- High flexibility due to synchronous rotation, which allows left and right sides of the aisle to be serviced in the same run.
- The auxiliary lift means that only a small mass has to be moved for final positioning at the pallet location, thus saving energy.
- When moving goods into and out of stock the overall lift height is increased; optimal utilisation of space up to the ceiling saves money.
- When order picking, the pallet can be brought to the most favourable height for depositing goods.
- High load throughput due to a simultaneous lowering with the main lift.
- High lowering speed even with a small load on the forks.

Chassis.

- Torsionally rigid steel structure with large load wheels for maximum driving comfort.
- Drive compartment covered with a plastic hood, which can be taken off to the rear. The battery lid is also in impact resistant “Mastershock” plastic. Optional removable battery side plates enclose the battery and round off the overall image of the chassis design.

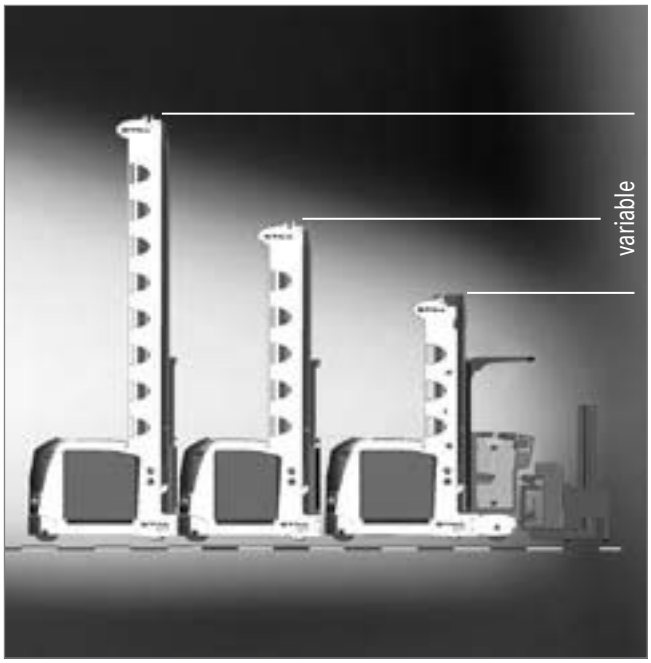
Hydraulics.

- The truck is equipped as standard with proportional valve technology to give particularly sensitive, smooth control of the secondary movements. The hoist controller controls the pump speed for the main lift through black and white valves for the greatest effectiveness.
- All movements can be individually adjusted to the application conditions.
- All end of stroke positions are approached gently and smoothly using controlled ramping.
- Using the hoist motor as a generator when lowering allows up to 15% energy recovery.
- The bypass concept used when lowering the main lift allows sensitive, precise positioning.

Drives in AC technology.

Low-wear, low-maintenance drive units combined with off-load switching MOSFET technology form the basis of the efficient, robust and economical drive concept of the MX-X.

- Monitoring and display of the drive status for effective preventative maintenance.
- The enclosed air-cooled three-phase motor does not move with the steering, thus doing away with stressed cable connections.
- Generously dimensioned gearbox and drive wheel for high levels of driving comfort and safety.



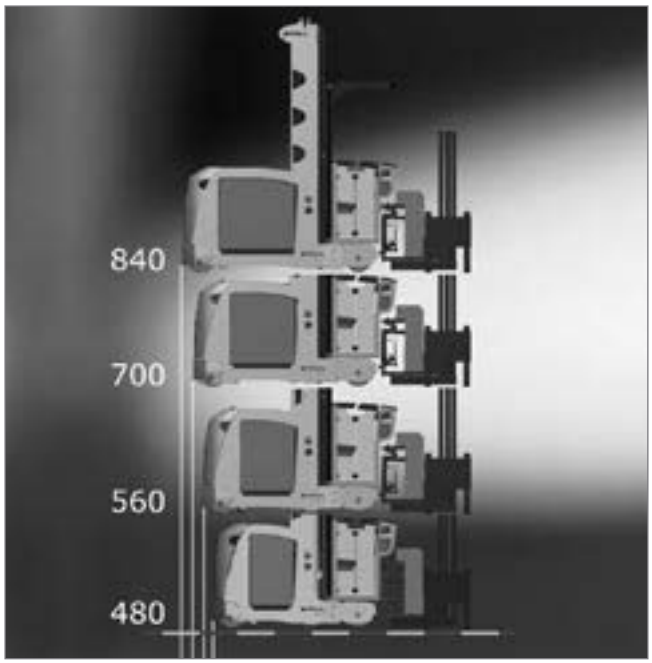
– High torque and peak speeds with particularly sensitive driving control independent of the load, economical in energy consumption and maintenance, with above average driving power.

Brake system.

– The service brake is a generator brake. An electrically released, spring-loaded brake is used for parking / safety and as an emergency stop.
– Two independent braking systems are practically wear-free in operation.
– Optional load wheel brake permits an increase of the driving performance.

Controller with OPTISPEED.

– At its heart are three efficient microprocessor controllers and the drive / hoist controller. Each is especially tailor-made for its task. The individual controllers, sensors and actuators are networked through an internal CAN-bus. All movements are continuously measured, so that travel-related functions are optimally controlled depending on their position.
– The CAN-bus with CAN open protocol offers high flexibility and fast access through the central interface, allowing simple fast diagnosis, maintenance and customer configuration. This proven technology from the automotive and commercial vehicle field has less wiring and fewer sensors and considerably improves long-term reliability.
– The height measurement system provides the absolute fork height to an accuracy of ± 5 mm. The drift-free safe height recording, even when including the auxiliary lift, allows performance-optimised driving profiles and load transfer cycles.
– The OPTISPEED concept allows the performance potential to be utilised to the full, both when driving and hoisting, and also for the secondary movements.
– Acceleration and deceleration figures are automatically adjusted to the lift conditions for greater goods throughput and working convenience.
– On the control panel, the driver can individually adjust the ergonomics and driving comfort for optimised performance.



Auxiliary equipment.

– Automatic braking at end of aisle, various designs.
– Hoist cut outs.
– Various drive cut-outs.
– Cut-out switch strips on the overhead guard.
– Guidance, mechanical or inductive.
– Workplace lighting.
– Working spot lights into racking.
– Side mounted rear view mirror.
– Standardised interface for data terminal.
– Data terminal with data transfer, printer, scanner and interface to the STILL MMS.
– Mobile personal protection equipment.
– Various chassis widths.
– Various cab widths.
– Various masts.
– Mast bracing.
– Various fork carriages for different pallets.
– Various hydraulic turret head functions.
– Various masts for auxiliary lift.
– Various attachments.
– Various seats.
– Writing surface with document clip.
– Macrolon cover for overhead guard.
– Battery roller track for lateral exchange.
– Various battery trays.
– Side battery compartment covers.
– Cable set for spare battery.
– Toothed-rack guard in the area of turret head (recommended for bagged goods).
– Topping up aid for hydraulic oil.
– Cold store version.
– Extra length driver's cab with super-luxury seat.
– Special MMS driver's cab.
– Preliminary set-up for radio installation on overhead guard.
– 3 variants of hydraulic fork adjustment.
– Wind protection at load end, glass screen integrated in cabin wall.
– Modules to improve performance.

MX-X Standard equipment.

– Service functions such as setting parameters, diagnosis and maintenance are done on the spot or via a modem through the central interface and the STILL STB (Service Tool Box).
– On-board diagnosis is possible without specialist knowledge or a laptop computer: this facilitates fast diagnosis and repair.
– OPTISPEED monitors all aspects of truck use and utilises the modern control technology to maximum effect:
– up to 30% high turnover performance.
– up to 40% less energy consumption.
– up to 20% lower maintenance times and costs.
– Simple and fast adjustment to individual application conditions.
– High staff motivation.
– High safety in all functions.
– Optimal residual capacity at all levels.

CAN-bus.

– All controls, sensors and actuators are networked.
– High flexibility due to central access to all units and functions.
– High level of safety due to the use of proven technology from the automotive and commercial vehicle field.
– Less wiring and fewer sensors for additional operating safety – over the long term too.

Battery compartment.

– Battery changing from either side using a forklift truck or a battery-changing frame. The battery is secured at the sides and electrically monitored.

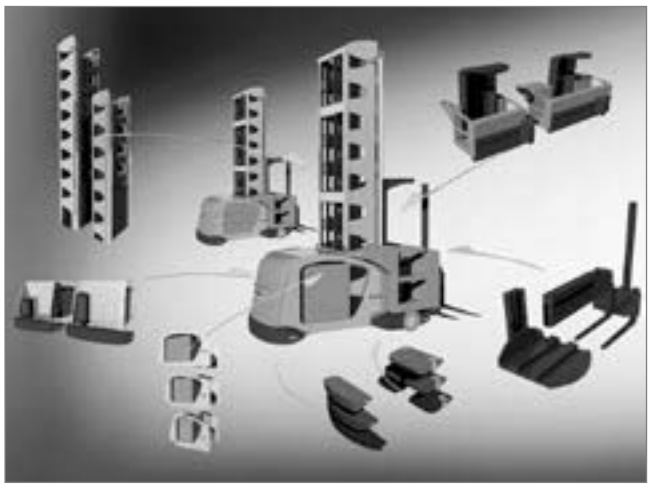
Battery.

For multi-shift use, various battery changing systems or a forklift truck can be used.
– The overall energy balance is up to 40% better, allowing the use of a smaller battery for the same throughput of goods or longer usage times without interim charging or battery changes.

Safety, design and ergonomics.

– Safety systems are in accordance with CE conformity.
– All drive and hoist movements are made safe through the deadman foot switch and two-handed operation.
– Rounded shapes and smoothly padded surfaces with many integral storage facilities.
– Abseil equipment integrated in the overhead guard, accessible quickly and without tools.

Modular system of MX-X.



– Emergency lowering valve under the rear hood, easily accessible from the aisle.
– OPTISPEED for additional safety in all functions, height dependent and redundant (Dual Monitoring). All fork movements are monitored using position sensors and transmitters.

Service and maintenance.

– The STILL STB (Service Tool Box) allows easy configuration, parameter setting and diagnosis.
– Central service and diagnostic interface for connection of the STILL STB.
– Long-term memory for malfunctions and display for error code.
– On-board diagnosis using menu keys on the operating panel.
– Drive compartment and rear hood designed for easy access from the aisle.
– Battery cover is opened from above for maintenance purposes and provides a service platform.
– Particularly low wear hydraulics due to integral high-pressure filter.
– Remote diagnosis and maintenance support possible by modem.

Automation components.

Material-flow Management, on-line via radio transmission, increases efficiency by issuing paperless orders and providing efficient material flow control, and achieves up to 30 % greater throughput of goods with virtually zero errors.
Integral mobile personal protection equipment provides extremely high safety in the aisle.

Safety.

– The truck is built in accordance with the EC guideline 98/37/EC and carries the “CE” symbol.
– STILL is certified to ISO 9001.

Order picking truck with turret head.

Characteristics	1.1	Manufacturer			STILL	STILL
	1.2	Manufacturer's model designation			MX-X telescopic mast	MX-X triplex mast with free lift
	1.3	Drive: electric, diesel, petrol, LPG, mains electric			Electric	Electric
	1.4	Operation (hand, pedestrian, stand-on, sit-on, order picker			Stand on / seated	Stand on / seated
	1.5	Capacity / load	Q	kg	500 - 1500	500 - 1500
	1.6	Load centre	c	mm	600	600
	1.9	Wheel base	y	mm	1586 - 2184	1586 - 2184
Weight	2.1	Truck weight		kg	variable*	variable*
	2.2	Axle load laden (drive end / load end)		kg	variable*	variable*
	2.3	Axle load unladen (drive end / load end)		kg	variable*	variable*
Wheels | chassis	3.1	Tyres (rubber, Vulkollan, pneumatic, polyurethane)			Vulkollan	Vulkollan
	3.2	Tyre diameter / width drive end		mm	400 / 140	406 / 170
	3.3	Tyre diameter / width load end		mm	370 / 160	370 / 160
	3.5	No. of wheels (x = driven) drive / load end			1x / 2	1x / 2
	3.6	Track width load end	b_{10}	mm	variable*	variable*
	3.7	Track width drive end	b_{11}	mm	0	0
Basic dimensions	4.2	Height, mast lowered	h_1	mm	2400 - 7400	2900 - 5900
	4.3	Free lift	h_2	mm	-	1650 - 4650
	4.4	Lift	h_3	mm	2300 - 11800	5050 - 12850
	4.5	Height, mast raised	h_4	mm	4855 - 14355	7605 - 15405
	4.7	Height over overhead guard (cab)	h_5	mm	2555	2555
	4.8	Seating / standing height	h_7	mm	430	430
	4.11	Auxiliary fork lift.	h_9	mm	1675 - 2375	1675 - 2375
	4.14	Standing height raised	h_{12}	mm	2730 - 12230	5480 - 13280
	4.14.1	Grip height (h12 + 1600 mm)	h_{28}	mm	4330 - 13830	7080 - 14880
	4.15	Height lowered	h_{13}	mm	80	80
	4.19	Overall length (including forks)	l_1	mm	variable*	variable*
	4.21	Overall width Chassis / load wheel axle	b_1/b_2	mm	1160 / 1160 - 1800	1160 / 1160 - 1800
	4.22	Fork dimensions	s / e / l	mm	variable*	variable*
	4.24	Fork carriage width	b_3	mm	variable*	variable*
	4.25	Overall fork width	b_5	mm	variable*	variable*
	4.27	Width over guide rollers	b_6	mm	1170 - 1919	1170 - 1919
	4.29	Side shift	b_7	mm	variable*	variable*
	4.31	Floor clearance, under mast, laden	m_1	mm	40	40
	4.32	Floor clearance, centre of wheel-base	m_2	mm	87	87
	4.34	Working aisle width	A_{st}	mm	variable*	variable*
	4.35	Turning radius	W_a	mm	variable*	variable*
	4.38	Distance to slewing fork pivot point	l_8	mm	variable*	variable*
	4.39	Length of shift carriage	A	mm	variable*	variable*
	4.40	Width of shift frame	B	mm	variable*	variable*
	4.41	Width of shift carriage	F	mm	variable*	variable*
	4.42	Turning aisle width min.	A_u	mm	variable*	variable*
Performance	5.1	Travel speed laden / unladen		km/h	variable*	variable*
	5.2	Hoist speed laden / unladen		m/s	variable*	variable*
	5.3	Lowering speed laden / unladen		m/s	variable*	variable*
	5.4	Shifting speed laden / unladen		m/s	variable*	variable*
	5.9	Acceleration time (over 10 m) laden / unladen		s	variable*	variable*
	5.10	Service brake			generator	generator
E-motors	6.1	Drive motor, rating S2 = 60 min		kW	7	7
	6.2	Hoist motor, rating at S3 = 15%		kW	20 - 24	20 - 24
	6.3	Battery to IEC 254-2, A, B, C, No			IEC 254-2; A	IEC 254-2; A
	6.4	Battery type, voltage, rated capacity C_5		V/Ah	PzS, 80 V, 420 - 930 Ah	PzS, 80 V, 420 - 930 Ah
	6.5	Battery weight +/- 5% (depends on make)		kg	1238 - 2310	1238 - 2310
Misc	8.1	Type of drive control			Micro-processor	Micro-processor
	8.4	Sound level at driver's ear		dB(A)	68	68

* = These values are scaleable and match the customer's individual requirements.

Telescopic mast.

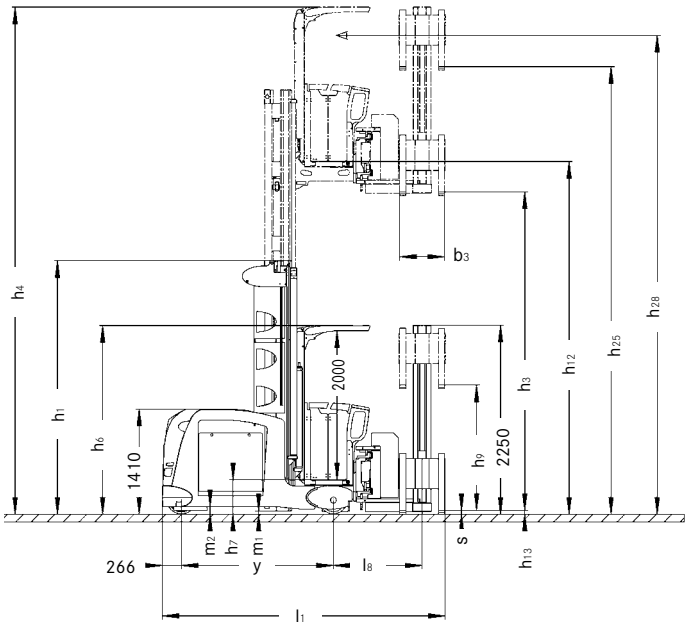
(all height details in mm).

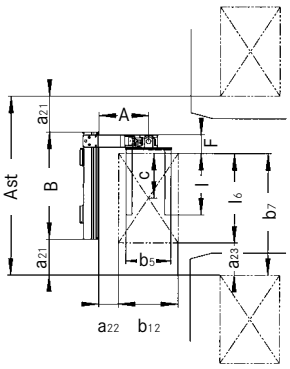
Type h_1	Total lift from floor h_{25} ($h_3+h_9+h_{13}$)	Total lift h_{24} (h_3+h_9)	Main lift h_3	Height lowered h_{13}	Auxiliary lift h_9	Platform heigth h_{12} (h_3+h_7)	Picking height h_{28} (h_7+1600)	Overall height h_4 (h_3+h_5)
7.400	13.535	13.475	11.800	60	1.675	12.230	13.830	14.355
6.900	12.535	12.535	10.800	60	1.675	11.230	12.830	13.355
6.400	11.735	11.675	10.000	60	1.675	10.430	12.030	12.555
5.900	10.735	10.675	9.000	60	1.675	9.430	11.030	11.555
5.400	9.935	9.875	8.200	60	1.675	8.630	10.230	10.755
4.900	8.935	8.875	7.200	60	1.675	7.630	9.230	9.755
4.400	7.935	7.875	6.200	60	1.675	6.630	8.230	8.755
3.900	6.935	6.875	5.200	60	1.675	5.630	7.230	7.755
3.400	5.935	5.875	4.200	60	1.675	4.630	6.230	6.755
2.900	4.935	4.875	3.200	60	1.675	3.630	5.230	5.755
2.400	4.035	3.975	2.200	60	1.675	2.730	4.330	4.855

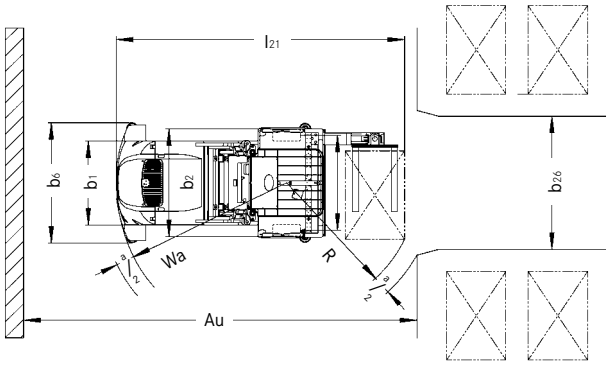
Triplex mast with free lift.

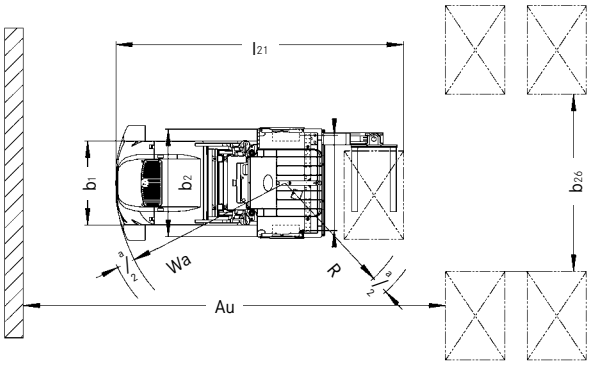
(all height details in mm).

Type h_1	Total lift from floor h_{25} ($h_3+h_9+h_{13}$)	Total lift h_{24} (h_3+h_9)	Main lift h_3	Free lift h_2 (h_1 -1250)	Height lowered h_{13}	Auxiliary lift h_9	Platform height h_{12} (h_3+h_7)	Picking height h_{28} (h_7+1600)	Overall height h_4 (h_3+h_5)
5.900	14.585	14.525	12.850	4.650	60	1.675	13.280	14.880	15.405
5.400	13.285	13.225	11.550	4.150	60	1.675	11.980	13.580	14.105
4.900	11.785	11.725	10.050	3.650	60	1.675	10.480	12.080	12.605
4.400	10.485	10.425	8.750	3.150	60	1.675	9.180	10.780	11.305
3.900	9.185	9.125	7.450	2.650	60	1.675	7.880	9.480	10.005
3.400	8.085	8.025	6.350	2.150	60	1.675	6.780	8.380	8.905
2.900	6.785	6.725	5.050	1.650	60	1.675	5.480	7.080	7.605









Order picking truck with telescopic forks.

Characteristics	1.1	Manufacturer			STILL	STILL
	1.2	Manufacturer's model designation			MX-Q telescopic mast	MX-Q triplex mast with free lift
	1.3	Drive: electric, diesel, petrol, LPG, mains electric			Electric	Electric
	1.4	Operation (hand, pedestrian, stand-on, sit-on, order picker			Stand on / seated	Stand on / seated
	1.5	Capacity / load	Q	kg	500 - 1250	500 - 1250
	1.6	Load centre	c	mm	600	600
	1.9	Wheel base	y	mm	1586 - 2184	1586 - 2184
Weight	2.1	Truck weight		kg	variable*	variable*
	2.2	Axle load laden (drive end / load end)		kg	variable*	variable*
	2.3	Axle load unladen (drive end / load end)		kg	variable*	variable*
Wheels | chassis	3.1	Tyres (rubber, Vulkollan, pneumatic, polyurethane)			Vulkollan	Vulkollan
	3.2	Tyre diameter / width drive end		mm	400 / 140	406 / 170
	3.3	Tyre diameter / width load end		mm	370 / 160	370 / 160
	3.5	No. of wheels (x = driven) drive / load end			1x / 2	1x / 2
	3.6	Track width load end	b_{10}	mm	variable*	variable*
	3.7	Track width drive end	b_{11}	mm	-	-
Basic dimensions	4.2	Height, mast lowered	h_1	mm	2400 - 7400	2900 - 5900
	4.3	Free lift	h_2	mm	-	1650 - 4650
	4.4	Lift	h_3	mm	2300 - 11800	5050 - 12850
	4.5	Height, mast raised	h_4	mm	4855 - 14355	7605 - 15405
	4.7	Height over overhead guard (cab)	h_5	mm	2555	2555
	4.8	Seating / standing height	h_7	mm	430	430
	4.11	Auxiliary fork lift.	h_9	mm	800 - 1500	800 - 1500
	4.14	Standing height raised	h_{12}	mm	2730 - 12230	5480 - 13280
	4.14.1	Grip height (h_{12} + 1600 mm)	h_{28}	mm	4330 - 13830	7080 - 14880
	4.15	Height lowered	h_{13}	mm	380	380
	4.19	Overall length (including forks)	l_1	mm	variable*	variable*
	4.21	Overall width Chassis / load wheel axle	b_1/b_2	mm	1160 / 1160 - 1800	1160 / 1160 - 1800
	4.22	Fork dimensions	s / e / l	mm	variable*	variable*
	4.24	Fork carriage width	b_3	mm	-	-
	4.25	Overall fork width	b_5	mm	variable*	variable*
	4.27	Width over guide rollers	b_6	mm	1170 - 1919	1170 - 1919
	4.29	Side shift	b_7	mm	variable*	variable*
	4.31	Floor clearance, under mast, laden	m_1	mm	40	40
	4.32	Floor clearance, centre of wheel-base	m_2	mm	87	87
	4.34	Working aisle width	A_{st}	mm	variable*	variable*
	4.35	Turning radius	W_a	mm	variable*	variable*
	4.38	Distance to slewing fork pivot point	l_8	mm	variable*	variable*
	4.39	Length of shift carriage	A	mm	-	-
	4.42	Turning aisle width min.	A_u	mm	variable*	variable*
Performance	5.1	Travel speed laden / unladen		km/h	variable*	variable*
	5.2	Hoist speed laden / unladen		m/s	variable*	variable*
	5.3	Lowering speed laden / unladen		m/s	variable*	variable*
	5.4	Shifting speed laden / unladen		m/s	variable*	variable*
	5.9	Acceleration time (over 10 m) laden / unladen		s	variable*	variable*
	5.10	Service brake			generator	generator
E-motors	6.1	Drive motor, rating S2 = 60 min		kW	7	7
	6.2	Hoist motor, rating at S3 = 15%		kW	20 - 24	20 - 24
	6.3	Battery to IEC 254-2, A, B, C, No			IEC 254-2; A	IEC 254-2; A
	6.4	Battery type, voltage, rated capacity C_5		V/Ah	PzS, 80 V, 420 - 930 Ah	PzS, 80 V, 420 - 930 Ah
	6.5	Battery weight +/- 5% (depends on make)		kg	1238 - 2310	1238 - 2310
Misc	8.1	Type of drive control			Micro-processor	Micro-processor
	8.4	Sound level at driver's ear		dB(A)	68	68

* = These values are scaleable and match the customer's individual requirements.

Telescopic mast.

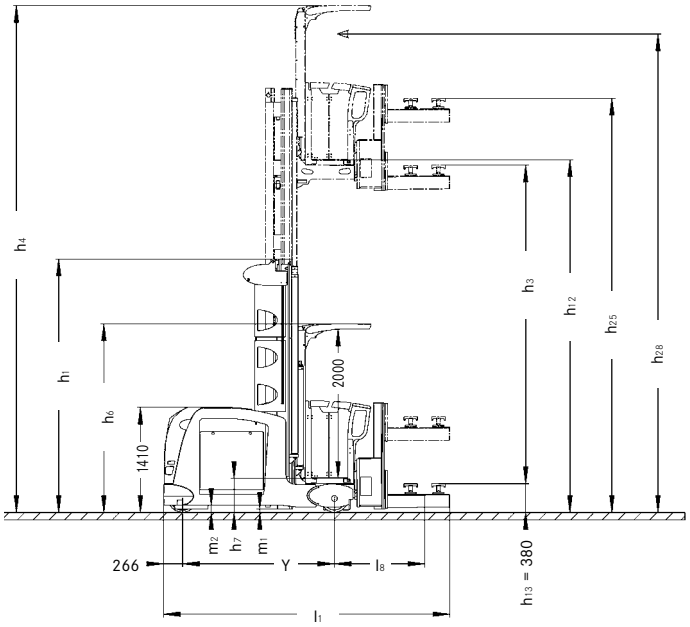
(all height details in mm)

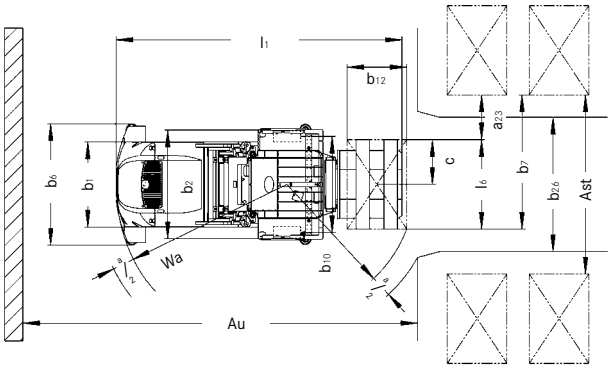
Type h_1	Total lift from floor h_{25} ($h_3+h_9+h_{13}$)	Total lift h_{24} (h_3+h_9)	Main lift h_3	Height lowered h_{13}	Auxiliary lift h_9	Platform heigth h_{12} (h_3+h_7)	Picking height h_{28} (h_7+1600)	Overall height h_4 (h_3+h_5)
7.400	12.980	12.600	11.800	380	800	12.230	13.830	14.355
6.900	11.980	11.600	10.800	380	800	11.230	12.830	13.355
6.400	11.180	10.800	10.000	380	800	10.430	12.030	12.555
5.900	10.180	9.800	9.000	380	800	9.430	11.030	11.555
5.400	9.380	9.000	8.200	380	800	8.630	10.230	10.755
4.900	8.380	8.000	7.200	380	800	7.630	9.230	9.755
4.400	7.380	7.000	6.200	380	800	6.630	8.230	8.755
3.900	6.380	6.000	5.200	380	800	5.630	7.230	7.755
3.400	5.380	5.000	4.200	380	800	4.630	6.230	6.755
2.900	4.380	4.000	3.200	380	800	3.630	5.230	5.755
2.400	3.480	3.100	2.300	380	800	2.730	4.330	4.855

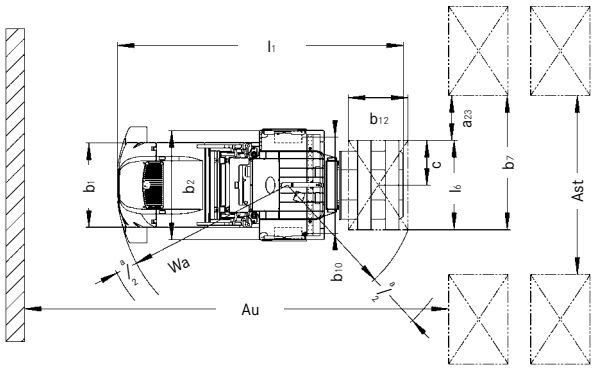
Triplex mast with free lift.

(all height details in mm)

Type h_1	Total lift from floor h_{25} ($h_3+h_9+h_{13}$)	Total lift h_{24} (h_3+h_9)	Main lift h_3	Free lift h_2 (h_1 -1250)	Height lowered h_{13}	Auxiliary lift h_9	Platform heigth h_{12} (h_3+h_7)	Picking height h_{28} (h_7+1600)	Overall height h_4 (h_3+h_5)
5.900	14.030	13.650	12.850	4.650	380	800	13.280	14.880	15.405
5.400	12.730	12.350	11.550	4.150	380	800	11.980	13.580	14.105
4.900	11.230	10.850	10.050	3.650	380	800	10.480	12.080	12.605
4.400	9.930	9.550	8.750	3.150	380	800	9.180	10.780	11.305
3.900	8.630	8.250	7.450	2.650	380	800	7.880	9.480	10.005
3.400	7.530	7.150	6.350	2.150	380	800	6.780	8.380	8.905
2.900	6.230	5.850	5.050	1.650	380	800	5.480	7.080	7.605

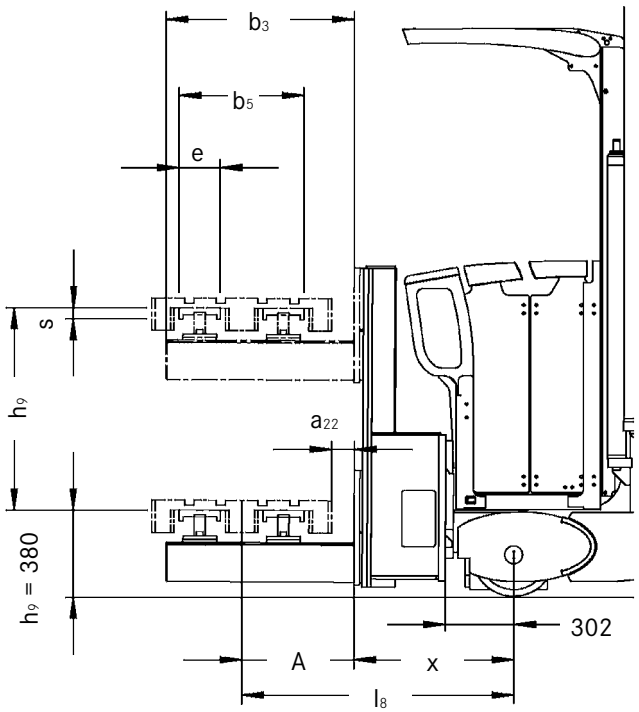






Standard telescopic fork version.

- Narrow working aisles.
- Minimum space required for changing aisles.
- Capacity up to 1250 kg max.

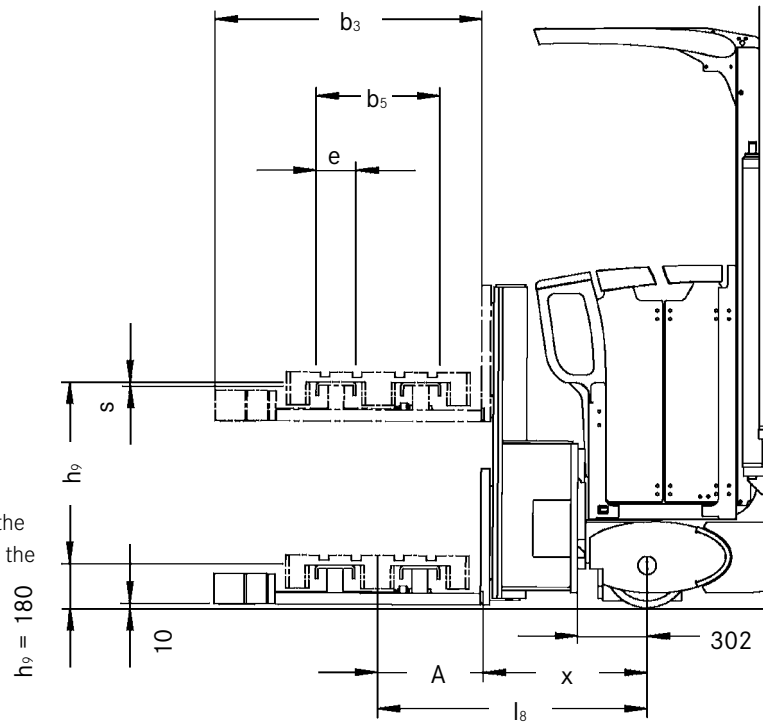


Standard telescopic fork h_{13} = 380 mm									a_{21} = 90 mm	a = 200 mm	Capacity
Model	l_6 x b_{12} pallet	A	a_{22}	x	l_8	h_9	b_3	b_7	Ast min.	Au min. / req.	Q max.
MX-Q	1200 x 800	500	100	710	1210	variable*	1055	1290	1380	variable*	1250
	1200 x 1000	600	100	710	1310	variable*	1055	1290	1380	variable*	1250
	1200 x 1200	700	100	710	1410	variable*	1305	1290	1380	variable*	1000
	1240 x 835	500	82	710	1210	variable*	1055	1330	1420	variable*	1250
	1300 x 1300	700	50	710	1410	variable*	1355	1390	1480	variable*	1000

* = These values are scaleable and match the customer's individual requirements.

Low telescopic fork version.

- The lowest racking support can be as low as 100 mm above the floor, giving optimal utilisation of space in the bottom area of the racking.
- Narrow working aisles.
- Minimum space required for changing aisles.
- Capacity up to 1250 kg max.



Low telescopic fork h_{13} = 180 mm									a_{21} = 90 mm	a = 200 mm	Capacity
Model	l_6 x b_{12} pallet	A	a_{22}	x	l_8	h_9	b_3	b_7	Ast min.	Au min. / req.	Q max.
MX-Q	1200 x 800	450	50	725	1175	variable*	1165	1290	1380	variable*	1250
	1200 x 1000	550	50	725	1275	variable*	1365	1290	1380	variable*	1000
	1200 x 1200	650	50	725	1375	variable*	1565	1290	1380	variable*	800
	1240 x 835	450	30	725	1175	variable*	1165	1330	1420	variable*	1250
	1300 x 1300	700	50	725	1425	variable*	1665	1390	1480	variable*	800

* = These values are scaleable and match the customer's individual requirements.

For further information on the MX-X please visit: www.still.de

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