

# Project and truck data

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## Project data

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Project title  
Technical offer no.  
Customer solution No.  
Consultant  
Telephone  
Email  
Date of offer

Prodrive  
12234922

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## Load support/load

Load: max. length	$l_{6_{\max}}$	1200 mm
Load: max. width	$b_{12_{\max}}$	1000 mm
Load: max. height	$h_{21_{\max}}$	1200 mm
Load: max. weight	$Q_{\max}$	1000 kg
Reach travel	$b_7$	1353 mm
Reach travel (reduced)	$b_{7_{\text{red}}}$	1353 mm
Load centre used to calculate the max. capacity (max. In fork direction)	$c_{\max}$	600 mm
Is synchronous rotation without load possible?		yes
Is synchronous rotation with load possible?		no

## Warehouse data

Lowest racking beam height	$R_{uk}$	0 mm
Racking beam height / needed max. Racking height	$R_{ok}$	4400 mm
Aisle width	$A_{st}$	1720 mm
Safety clearance (min.): truck to pallet in rack	$a_{21}$	128 mm
Safety clearance: pallet on truck to pallet in rack	$a_{23}$	153 mm
Transfer aisle width (min.) laden	$Au_{\min\_mL}$	4281 mm
Transfer aisle width (min.) unladen	$Au_{\min\_oL}$	4150 mm
Transfer aisle width (proposed) laden	$Au_{\text{opt\_mL}}$	4981 mm
Transfer aisle width (proposed) unladen	$Au_{\text{opt\_oL}}$	4850 mm

## Truck data

Manufacturer's model designation		MX-X
Rated load	$Q_{\text{nenn}}$	1000 kg
Residual capacity at lift $h_{25\_max}$	$Q_{\text{rest}}$	1000 kg
Residual capacity (max.) / total lift		1000/6460 kg/mm
Residual capacity / total lift (max.)		1000/6460 kg/mm
Closed height	$h_1$	3400 mm
Lift height	$h_3$	4600 mm
Closed height: supplementary lift	$h_{1\_ZH}$	2585 mm
Supplementary lift	$h_9$	1800 mm
Total lift	$h_{24}$	6400 mm
Total lift height above floor	$h_{25}$	6460 mm
Height, mast raised	$h_4$	7185 mm
Platform floor height - raised	$h_{12}$	5060 mm
Platform height, lowered	$h_7$	460 mm
Picking height	$h_{28}$	6660 mm
Cab: width	$b_{25}$	1420 mm
Usable fork length		1200 mm
Lowered fork height	$h_{13}$	60 mm

## Driving speeds max. (unguided)

- V max. with rated load in load direction	9,00 km/h
- up to lift: V max. With rated load	1200 mm
- V min. with rated load	2,50 km/h

## Driving speeds max. (guided)

- V max. without load	9,10 km/h
- up to lift: V max. Without load	6460 mm
- V min. without load	9,10 km/h
- as of lift: V min. without load	6460 mm
- V max. with rated load	9,10 km/h
- up to lift: V max. With rated load	3635 mm
- V min. with rated load	5,43 km/h
- as of lift: V min. with rated load	6460 mm

## Lifting speeds max.

Lifting speed: main lift without load	0,40 m/s
Lifting speed: main lift with rated load	0,40 m/s
Vmax lowering main lift without load	0,45 m/s
Vmax lowering main lift with rated load	0,45 m/s

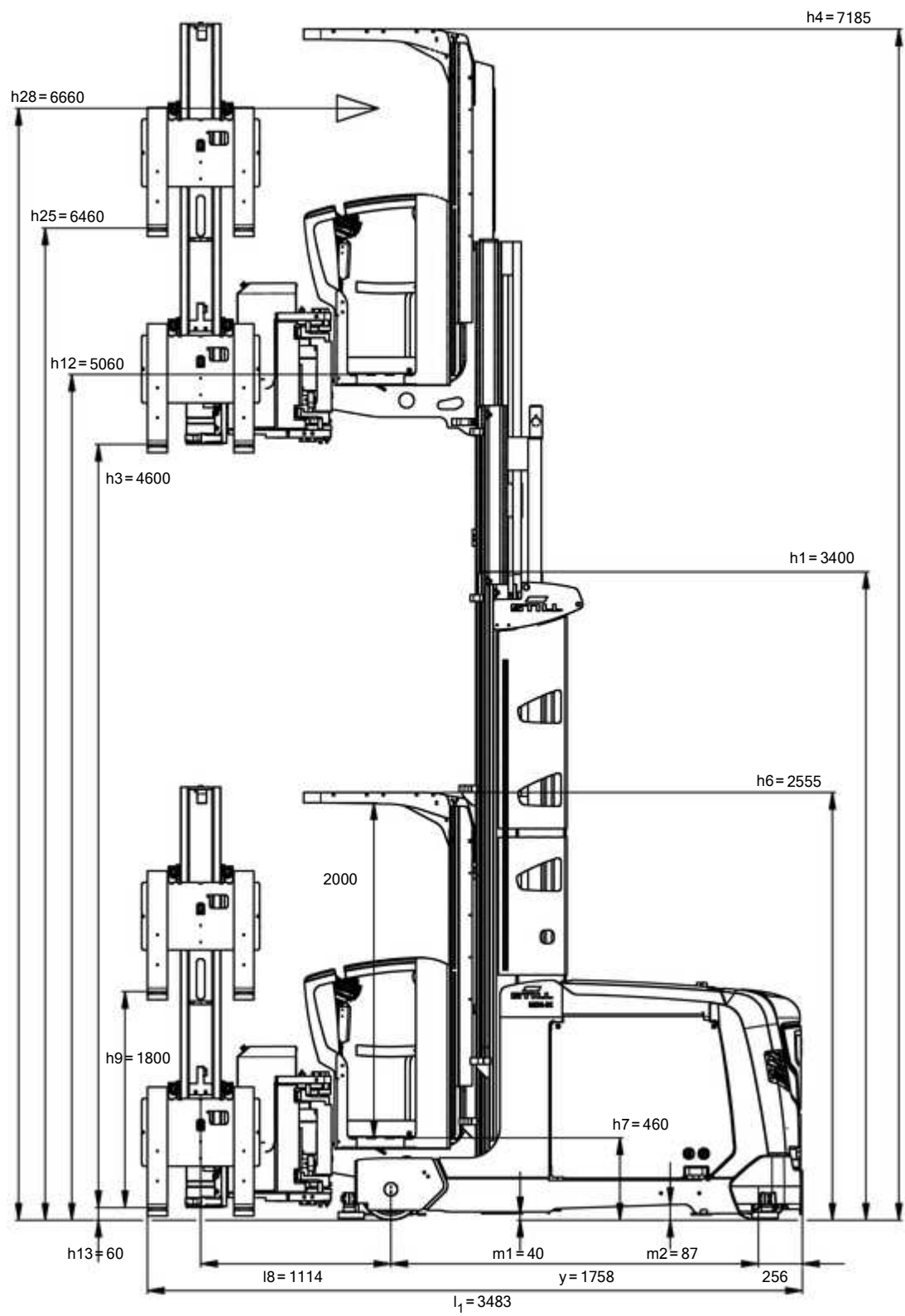
## Axle / wheel loadings

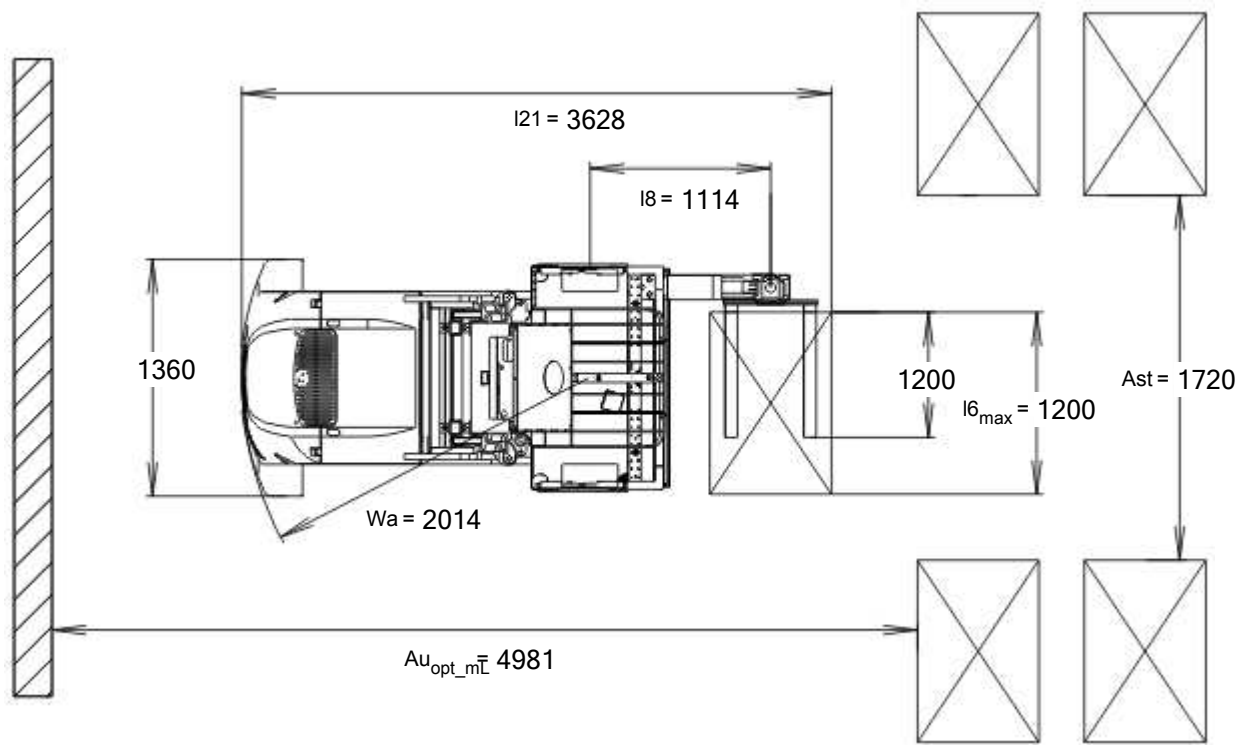
Wheel pressure (max.): forks reached out with nominal weight		4532 kg
Floor loading (max.; static)		0,522 kN/cm <sup>2</sup>
Floor loading (values according to DIN 1055-3;2006-03)	$q_k$	20,30 kN/m <sup>2</sup>

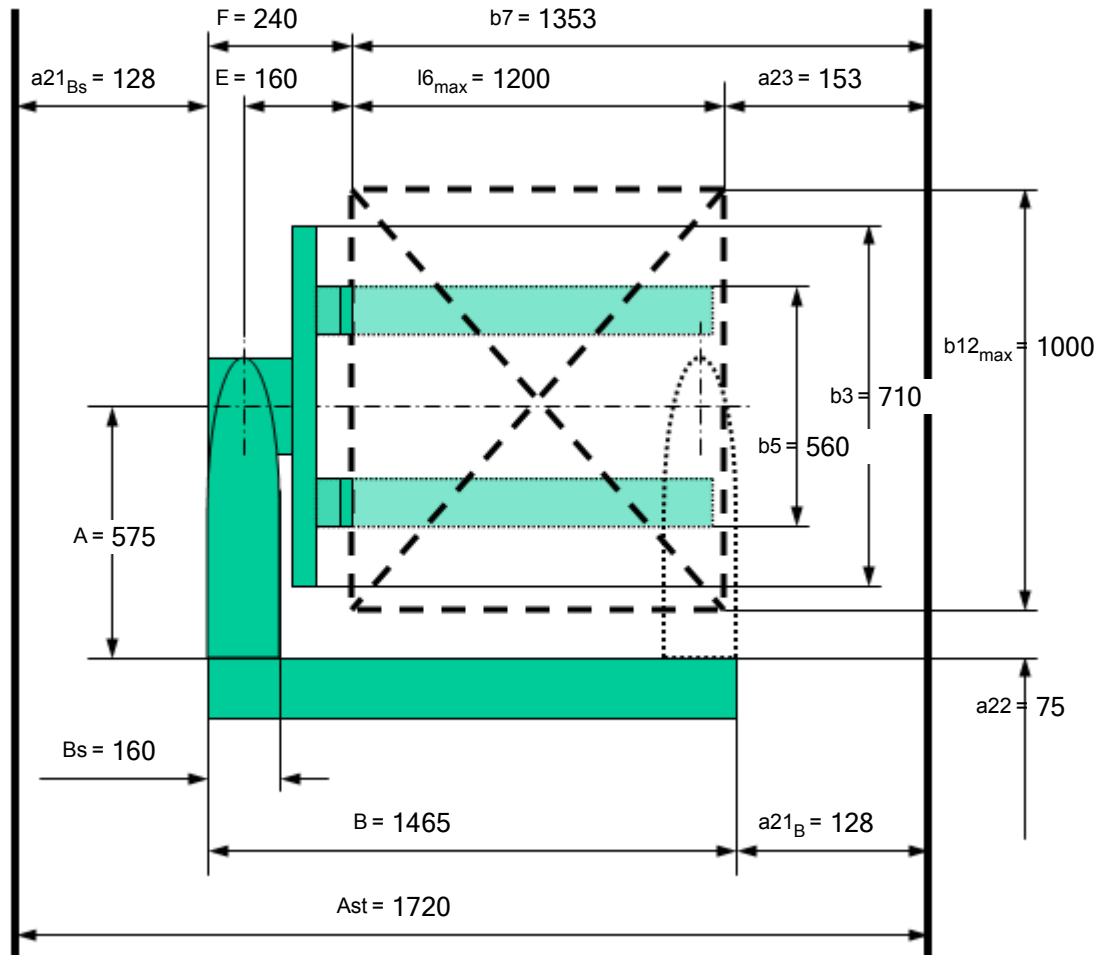
## Hints

Values can vary +/- 10%. The calculated speed profiles are based on our floor quality rules. Subject to change without notice.









## General data

Load: max. length	$l6_{max}$	1200	mm
Load: max. width	$b12_{max}$	1000	mm
Aisle width	$Ast$	1720	mm
Aisle width (recommended min.; VNA)	$Ast_{min}$	1720	mm
Reach travel	VNA		
Reach travel (reduced)	$b7$	1353	mm
Allow lower clearance as needed.	$b7_{red}$	1353	mm
Standard safety clearance: truck to pallet in rack		no	
Speed profile: min. safety clearance	$a21_{min}$	140	mm
Safety clearance: Carriage to pallet in rack		140	mm
Safety clearance: head to pallet in rack	$a21_{Bs}$	128	mm
Safety clearance: cab to pallet in rack	$a21_B$	128	mm
Safety clearance: fork tips to pallet in rack	$a21_{b25}$	150	mm
Distance: reach carriage to load on head	$a21_l$	153	mm
Safety clearance: pallet on truck to pallet in rack	$a22$	75	mm
Load: max. weight for attachment	$a23$	153	mm
		1500	kg

## Attachment dimensioning

Distance forks to clear height into pallet (bottom, top), min.		15	mm
Heads: types and variants	SSG_HV		
Load centre	A	575	mm
Overall head width (incl. forks)	F	240	mm
Distance: center of rotation to fork backrest	E	160	mm
Width of head	Bs	160	mm
Reach carriage: width	B	1465	mm
Forks: length	l	1200	mm
Usable fork length		1200	mm
Forks: thickness	s	50	mm
Forks: width	e	120	mm
Fork carriage width	b3	710	mm
Width over forks	b5	560	mm
Width over forks (max.)	$b5_{max}$	640	mm
Width over forks (min.)	$b5_{min}$	470	mm

Lowered fork height	h13	60 mm	
Overreach per side		47,5	
<b>Auxiliary lift</b>			
Closed height: supplementary lift	h1 <sub>ZH</sub>	2585 mm	
Supplementary lift	h9	1800 mm	
<b>Options</b>			
Turret head: with overreach			yes
Turret head: for better safety clearance (a23/Emin)			yes
set a21 and a23 to the same value (used e.g. for optimization: synchronous rotation)			no
Optimization: Head clearance with small aisle width			no
<b>Results - synchronous swifeling</b>			
Is synchronous rotation without load possible?			yes
Is synchronous rotation with load possible?			no

Characteristics	1.1 Manufacturer			STILL
	1.2 Manufacturer's model designation			MX-X
	1.3 Power unit			Battery
	1.4 Operation			Stand-on/Seated
Weight	1.5 Load carrying capacity	Q	kg	1000
	1.6 Load centre (c)	c	mm	600
	1.9 Wheelbase (y)	y	mm	1758
Wheels	2.1 Weight (incl. battery)		kg	6708
	2.2 Axle loadings with load drive side/load side		kg	1836/5873
	2.3 Axle loadings without load drive side/load side		kg	2485/4223
	3.1 Tyres			Polyurethane
Basic dimensions	3.2 Tyre size - drive side		mm	360/130
	3.3 Tyre size - load side		mm	370/160
	3.5 Wheels - number drive side/load side (x = drive wheel)			1x/2
	3.6 Track width - load side (b10)	b10	mm	1245
	3.7 Track width - drive side (b11)	b11	mm	0
	4.2 Height of mast, lowered (h1)	h1	mm	3400
	4.4 Lift height (h3)	h3	mm	4600
	4.5 Height, mast raised (h4)	h4	mm	7185
	4.7 Height to top of overhead guard (h6)	h6	mm	2555
	4.8 Seat height (h7)	h7	mm	460
	4.11 Supplementary lift (h9)	h9	mm	1800
	4.14 Platform floor height - raised (h12)	h12	mm	5060
	4.14.1 Picking height (h12 + 1600) (h28)	h28	mm	6660
	4.15 Fork height lowered (h13)	h13	mm	60
	4.19 Overall length (incl. fork) (l1)	l1	mm	3483
	4.21 Overall width (b1/b2)	b1/b2	mm	1160/1450
	4.22 Fork dimensions (s/e/l)	s/e/l	mm	50120/1200
	4.24 Width of fork carriage (b3)	b3	mm	710
	4.25 Width over forks min./max. (b5)	b5	mm	470/640
Performance	4.29 Lateral reach travel (b7)	b7	mm	1353
	4.31 Ground clearance beneath mast, laden (m1)	m1	mm	40
	4.32 Ground clearance at center of wheelbase (m2)	m2	mm	87
	4.34 Aisle width	Ast	mm	1720
	4.35 Turning radius (Wa)	Wa	mm	2014
	4.38 Center of axle to fork pivot (l8)	l8	mm	1114
	4.39 Head centre (A)	A	mm	575
	4.40 Width of reach carriage (B)	B	mm	1465
	4.41 Head width (F)	F	mm	240
	4.42 Transfer aisle width (min.)	Au	mm	4281
E-motors	4.44 Cab: entrance width		mm	412
	4.45 Cab: clear height		mm	2000
	5.1 Travel speed with/without load		km/h	9,1/9,1
	5.2 Lift speed with/without load		m/s	0,40/0,40
	5.3 Lowering speed with/without load		m/s	0,45/0,45
Sonstiges	5.4 Reach speed with/without load		m/s	0,33/0,40
	5.9 Acceleration time with/without load		s	6/6
	5.10 Brakes			Regenerative
	6.1 Drive motor, Power		kW	6,5kW / S2=60min
	6.2 Lift motor, Power		kW	13,0kW / S3=20%
Sonstiges	6.3 Battery			IEC 254-2; B
	6.4 Battery type, voltage, capacity (5h)		V/Ah	PzS, 48V, 930Ah
	6.5 Battery weight +/- 5%		kg	1309
Sonstiges	8.1 Type of drive control			Microprocessor
	8.4 Noise level at operator's ear		dB(A)	68
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Speed Profile (max.)

