

# 14/16/20/25BRJ-9

Electric Reach Trucks

HYUNDAI FORKLIFT



 **HYUNDAI**  
FORKLIFT

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# Your satisfaction is **our priority!**

Hyundai introduces a new line of 9-series battery forklift trucks.  
The newly designed seated reach trucks provide operator comfort,  
increased productivity and easy maintenance.



## Compact forklift with proven AC technology

- Maximum performance
- Spacious operator cab
- Curve control system
- Load indicator (optional)
- Camera (optional)
- Auto fork leveling system (optional)



# Superior Power & Optimal Performance

■ Photos may include optional equipment.



## Minimum turning radius

Suited to narrow aisle operation, the compact design ensures efficiency and maximum space utilization.

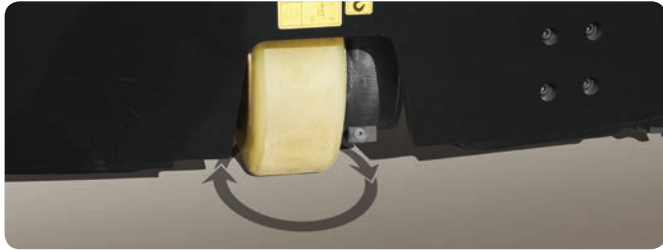


## Versatile reach stroke

The multi-roller reach assembly provides a smooth, controlled and safe load handling system. The extended reach allows for unsurpassed versatility.

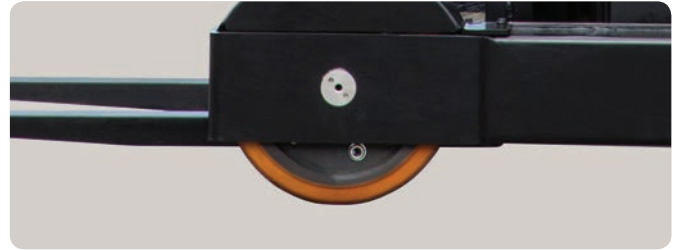
Efficient, smooth and powerful performance provides increased productivity.

## 14/16/20/25BRJ-9



### Automatic center position at starting

When the key is in the "on" position, a proximity switch detects the drive wheel position and the wheel automatically returns to the center position.



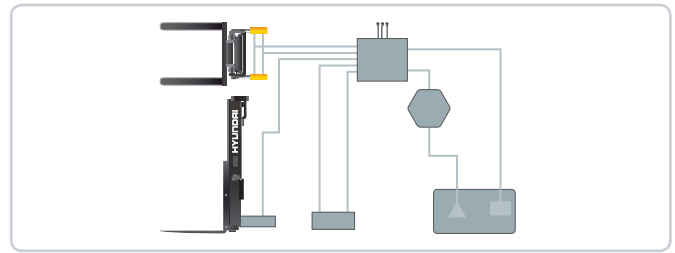
### Electromagnetic brake

An electromagnetic load wheel brake provides increased brake torque and stability.



### FWD / REV switch

The forward / reverse switch provides the operator with smooth, precise directional control.



### State-of-the-art hydraulic system

The efficient, high frequency (8kHz) controller provides smooth, quiet operation and protection from low and high voltage, overheating and fault codes.



### Drive motor and pump motor

The efficient, optimized AC motor ensures reliability and provides low noise levels. A temperature sensor ensures longer motor life.



### Energy efficiency

High (H) mode: 100%  
Normal (N) mode: 110%  
Economy (E) mode: 120%

### High technology ZAPI controller

The efficient, 8kHz high-frequency controller provides smooth, quiet operation and protection for low and high voltage, overheating and fault recording.



### Improved gradeability and anti roll-back

The anti roll-back system offers protection against the machine rolling back on a ramp and provides exceptional ramp start capabilities.

### Reach cutback control

The reach cutback control system reduces reach in / out speed automatically at reach in / out end to suppress shock and ensure operator safety and comfort.

### Traction speed cutback

In order to improve safety, traction speed is automatically reduced if the mast is raised higher than the free cylinder section.

### End-tip cut back

Lift speed automatically reduces at 100 mm prior to lift end to suppress shock and ensure operator safety and comfort.

# Optimized ergonomics, **advanced safety**



■ Photos may include optional equipment.



## **New steering control handle design**

A new steering control design, featuring electric power steering, provides the operator with exceptionally smooth, precise steering in tight spaces.



## **Proportional fingertip control**

Minimal operator effort is required to deliver precise, safe and productive control.



## **Non-slip floor mat**

A heavy, vibration-dampening, non-slip floor mat reduces operator fatigue and increases productivity.



## **Brake pedal**

A balanced brake pedal design ensures smooth braking. The replaceable cover reduces maintenance costs.

Designed for improved safety, the cab delivers increased operator comfort.

## 14/16/20/25BRJ-9



### Excellent visibility for safe operation

The optimized lift cylinder location provides the operator with a wider view of the work environment.



### Strong overhead guard

Meeting ISO 6055 and ASME/ANSI regulations, the overhead guard offers optimal protection.



### Headrest cushion pad

A large, soft cushion pad is positioned for operator safety and comfort.



### Cup holder, console box and storage space

Additional storage spaces are conveniently located inside the cab.



### Comfortable operator environment

The fully adjustable suspension seat provides optimum operating position and reduces fatigue. Available in a fabric seat (standard) or PVC (optional).



### Camera and LCD monitor (optional)

A camera installed on the side of the fork provides excellent visibility for the operator (standard on models TF700 and up).



# Fast, easy maintenance

## Maintenance



**Battery disconnect lever and emergency switch**



**Easy battery replacement**



**Easily accessible, compact fuse box**

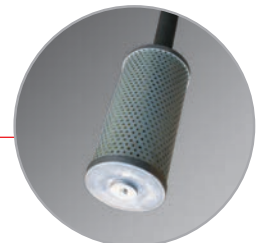


### **DC-DC converter**

The DC-DC converter meets UL & CE regulations and prevents short circuit overload and reverse polarity.



### **Reliable MOSFET type controller**



### **Hydraulic filter**



Components are arranged for easy service and maintenance access.

## Advanced LCD monitor

Steering wheel position and running direction

Turtle mode

Speed (digital)

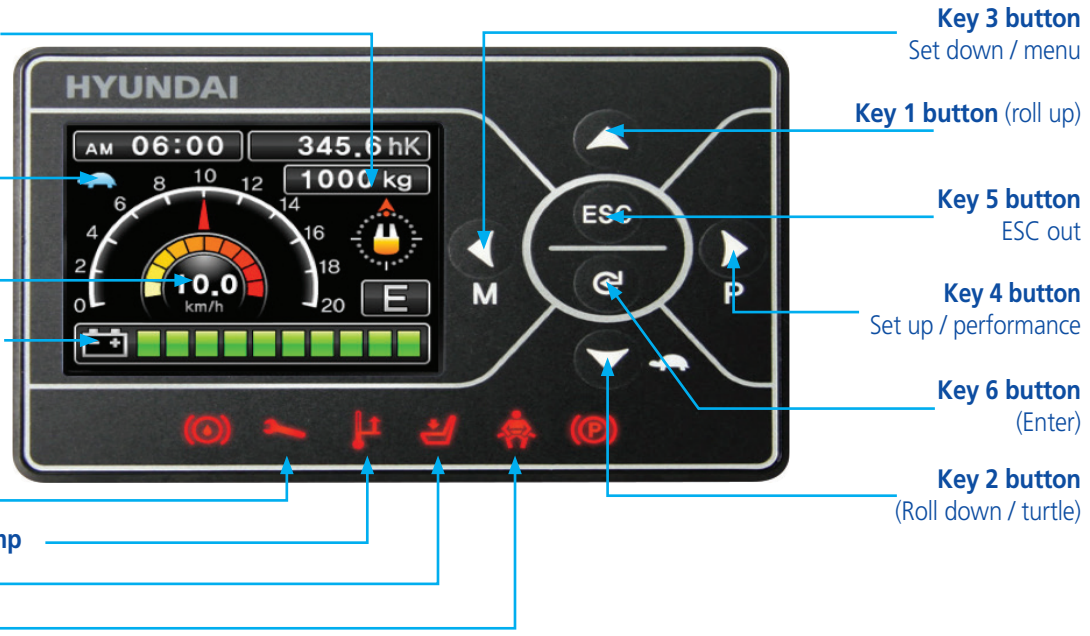
Battery's state of charge

Wrench warning lamp

Temperature warning lamp

Seat warning lamp

Seat belt warning lamp



Key 3 button  
Set down / menu

Key 1 button (roll up)

Key 5 button  
ESC out

Key 4 button  
Set up / performance

Key 6 button  
(Enter)

Key 2 button  
(Roll down / turtle)

With the 3.5-inch wide LCD color monitor, the operator can control the machine with ease. The monitor provides information about speed, acceleration, steer angle, travel direction, battery discharge, hour meter and working mode. The optional load indicator displays the load weight. A height-of-fork indicator is optional. The operator can select various performance modes for all working conditions. Information can be displayed in up to 11 languages.

The monitor also displays information about operation error, system faults, battery level, hour meter and a variety of other functions. The monitor allows the operator to maintain the forklift in optimum condition.

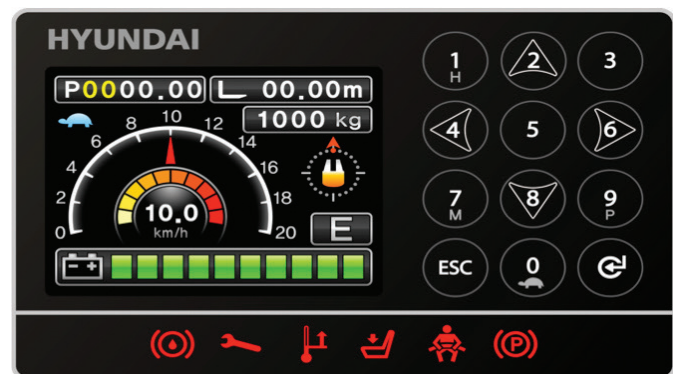
**H** (High) mode **N** (Normal) mode **E** (Economic) mode

**Turtle mode**



## Easy maintenance

The hinged hood makes daily maintenance easy and convenient.



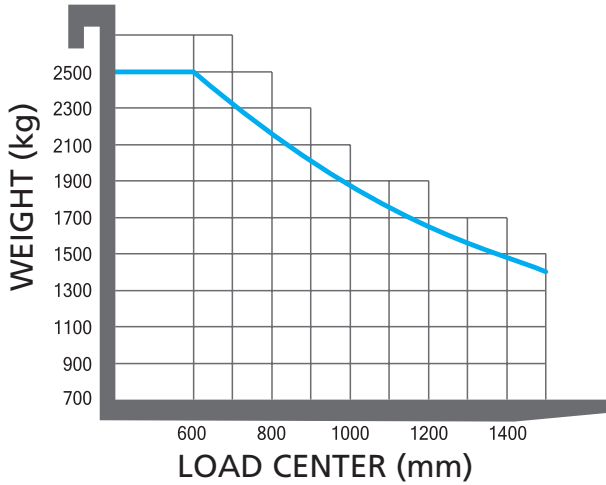
## LCD monitor (optional for height indicator)

# New 9 Series

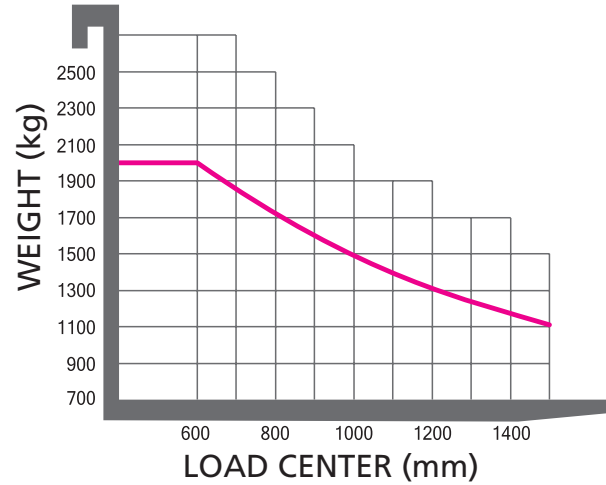
## Load capacity

MODEL	MAST	BATTERY WEIGHT
14 / 16BRJ-9	TF530	750 Kg
20 / 25BRJ-9	TF530	940 Kg

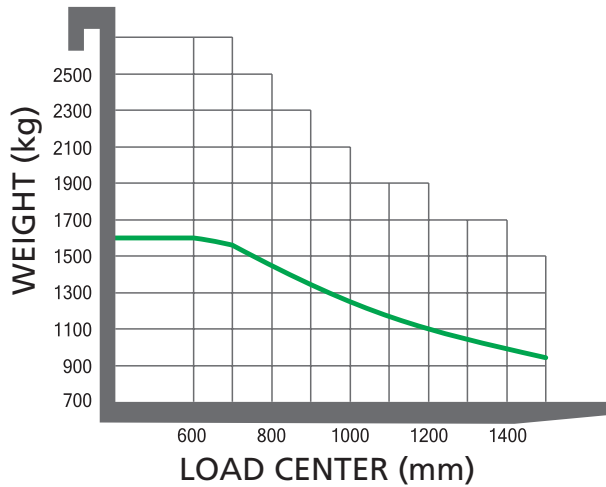
25BRJ-9



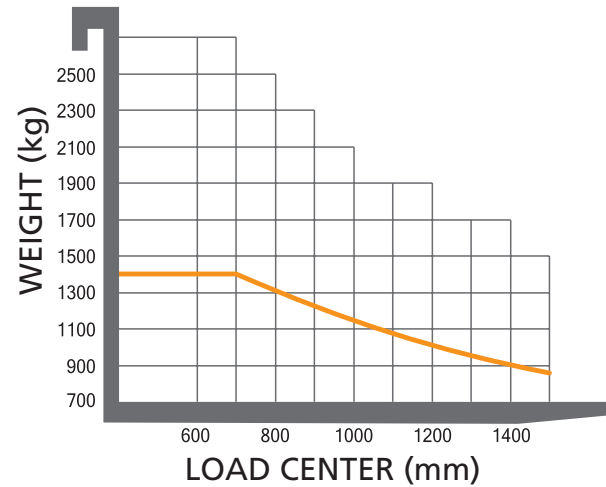
20BRJ-9



16BRJ-9



14BRJ-9



## Options

- UL (ES)
- Beacon lamp (LED / bulb) - amber, blue, red
- Fork camera, carriage camera
- Cold storage
- Work lamp (LED)
- Rear lamp (LED, bulb)
- Auto tilt leveling
- Load indicator
- Battery
- Charger, 3 phases: 220 / 380V, 410V, 440V
- Joystick lever
- Fork height indicator and preselector
- Fork (mm)
  - 14/16BRJ-9: 900, 950, 1000, 1050, 1150, 1200 (STD), 1350, 1500, 1600
  - 20/25BRJ-9: 1000, 1050, 1200 (STD), 1350, 1500, 1650, 1800
- Side-shift: Max. 140 mm
- Tire: Urethane (standard), Vulkollan (optional)
- Seat: Fabric (standard), PVC (optional)

## Mast specifications (14 / 16BRJ-9)

Mast Type	Maximum Fork Height		Overall Height Lowered		Overall Height Lifted				Tilt Angle Fwd/Rev				Tilt Angle Fwd / Bwd		Truck Weight Unloaded					
					With Load Backrest		Without Load Backrest		With Load Backrest		Without Load Backrest		Rev	Bwd						
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg			
3-stage full free lift	14/16BRJ-9																14BRJ-9		16BRJ-9	
	TF430	170.9	4,340	79.1	2,009	244.4	5,370	190.8	4,846	38.5	979	56.0	1,422	2	5	6,786	3,078	6,991	3,171	
	TF470	186.6	4,740	85.0	2,159	227.2	5,770	206.5	5,246	44.4	1,129	61.9	1,572	2	5	6,878	3,120	7,083	3,213	
	* TF530	208.9	5,306	92.4	2,348	249.4	6,336	228.8	5,812	51.9	1,318	69.3	1,761	2	5	6,980	3,166	7,185	3,259	
	TF550	218.1	5,540	96.8	2,459	258.7	6,570	238.0	6,046	56.3	1,429	73.7	1,872	2	5	7,068	3,206	7,273	3,299	
	TF600	237.8	6,040	104.7	2,659	278.3	7,070	257.7	6,546	64.1	1,629	81.6	2,072	2	5	7,196	3,264	7,401	3,357	
	TF650	257.5	6,540	112.6	2,859	298.0	7,570	277.4	7,046	72.0	1,829	89.4	2,272	2	5	7,606	3,450	7,811	3,543	
	TF700	275.8	7,006	118.7	3,014	316.4	8,036	295.7	7,512	78.1	1,984	95.5	2,427	2	5	7,670	3,479	7,875	3,572	
	TF750	295.5	7,506	122.3	3,106	336.1	8,536	315.4	8,012	81.7	2,076	99.2	2,519	2	5	7,727	3,505	7,932	3,598	
	TF800	315.2	8,006	130.2	3,306	355.7	9,036	335.1	8,512	89.6	2,276	107.0	2,719	2	5	7,864	3,567	8,069	3,660	
	TF850	334.9	8,506	136.7	3,473	375.4	9,536	354.8	9,012	96.2	2,443	113.6	2,886	2	5	8,060	3,656	8,265	3,749	
	TF900	354.6	9,006	143.3	3,640	395.1	10,036	374.5	9,512	102.8	2,610	120.2	3,053	2	5	8,172	3,707	8,377	3,800	
	TF950	374.3	9,506	149.9	3,807	414.8	10,536	394.2	10,012	109.3	2,777	126.8	3,220	2	5	8,285	3,758	8,490	3,851	
	TF1000	393.9	10,006	157.8	4,007	434.5	11,036	413.9	10,512	117.2	2,977	134.6	3,420	2	5	8,474	3,844	8,680	3,937	
	TF1050	413.6	10,506	164.3	4,174	454.2	11,536	433.5	11,012	123.8	3,144	141.2	3,587	2	5	8,587	3,895	8,792	3,988	

\* Standard

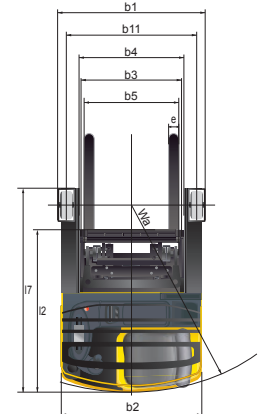
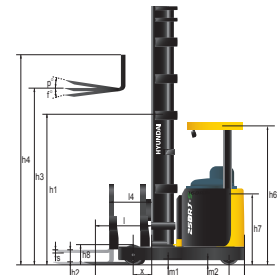
## Mast specifications (20 / 25BRJ-9)

Mast Type	Maximum Fork Height		Overall Height Lowered		Overall Height Lifted				Free Lift Height				Tilt Angle Fwd/Rev		Truck Weight Unloaded					
					With Load Backrest		Without Load Backrest		With Load Backrest		Without Load Backrest		Rev	Bwd						
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg			
3-stage full free lift	20 / 25BRJ-9																20BRJ-9		25BRJ-9	
	TF430	169.5	4,305	80.2	2,036	212.8	5,406	195.8	4,974	36.8	935	53.8	1,367	2	5	8,190	3,715	8,686	3,940	
	TF470	185.2	4,705	86.1	2,186	228.6	5,806	211.6	5,374	42.7	1,085	59.7	1,517	2	5	8,280	3,756	8,779	3,982	
	* TF530	208.9	5,305	93.9	2,386	252.2	6,406	235.2	5,974	50.6	1,285	67.6	1,717	2	5	8,375	3,799	8,874	4,025	
	TF570	224.6	5,705	99.2	2,519	268.0	6,806	250.9	6,374	55.8	1,418	72.8	1,850	2	5	8,472	3,843	8,971	4,069	
	TF630	248.2	6,305	108.0	2,744	291.6	7,406	274.6	6,974	64.7	1,643	81.7	2,075	2	5	8,607	3,904	9,103	4,129	
	TF670	264.0	6,705	113.3	2,877	307.3	7,806	290.3	7,374	69.9	1,776	86.9	2,208	2	5	9,039	4,100	9,535	4,325	
	TF700	275.8	7,005	117.2	2,977	319.1	8,106	302.1	7,674	73.9	1,876	90.9	2,308	2	5	9,112	4,133	9,608	4,358	
	TF750	295.5	7,505	123.8	3,144	338.8	8,606	321.8	8,174	80.4	2,043	97.4	2,475	2	5	9,233	4,188	9,729	4,413	
	TF800	315.2	8,005	131.3	3,336	358.5	9,106	341.5	8,674	88.0	2,235	105.0	2,667	2	5	9,372	4,251	9,870	4,477	
	TF850	334.9	8,507	137.9	3,503	378.3	9,608	361.3	9,176	94.6	2,402	111.6	2,834	2	5	9,594	4,352	10,090	4,577	
	TF900	354.6	9,007	144.5	3,670	398.0	10,108	380.9	9,676	101.1	2,569	118.1	3,001	2	5	9,716	4,407	10,214	4,633	
	TF950	374.4	9,509	151.1	3,837	417.7	10,610	400.7	10,178	107.7	2,736	124.7	3,168	2	5	9,839	4,463	10,335	4,688	
	TF1000	394.0	10,007	158.6	4,029	437.3	11,108	420.3	10,676	115.3	2,928	132.3	3,360	2	5	9,978	4,526	10,476	4,752	
	TF1050	413.7	10,507	165.2	4,196	457.0	11,608	440.0	11,176	121.9	3,095	138.9	3,527	2	5	10,203	4,628	10,699	4,853	
	TF1100	433.3	11,007	171.8	4,363	476.7	12,108	459.7	11,676	128.4	3,262	145.4	3,694	2	5	10,318	4,680	10,814	4,905	
	TF1150	453.0	11,507	179.3	4,555	496.4	12,608	479.4	12,176	136.0	3,454	153.0	3,886	2	5	10,456	4,743	10,955	4,969	
TF1200	472.7	12,007	185.9	4,722	516.1	13,108	499.1	12,676	142.6	3,621	159.6	4,053	2	5	10,578	4,798	11,074	5,023		

\* Standard

# Technical data for 14 / 16 / 20 / 25BRJ-9

		HYUNDAI		HYUNDAI			
		14BRJ-9	16BRJ-9	20BRJ-9	25BRJ-9		
Identification	1.1	Manufacturer	HYUNDAI		HYUNDAI		
	1.2	Manufacturer's model designation	14BRJ-9	16BRJ-9	20BRJ-9	25BRJ-9	
	1.3	Power supply: electric, diesel, petrol, gas, manual	Electric	Electric	Electric	Electric	
	1.4	Type of operation: hand, pedestrian, standing, seated, order-picker	Seated	Seated	Seated	Seated	
	1.5	Load capacity / rated load	Q (t)	1.4	1.6	2	2.5
	1.6	Load center distance	c (mm)	600	600	600	600
	1.8	Load distance, center of drive axle (loadwheel) to fork	x (mm)	314	364	340	490
	1.9	Wheelbase	y (mm)	1410	1460	1520	1670
	2.1	Service weight (including battery)	kg	3166	3259	3799	4025
Weights	2.3	Axle loading, reach in, unloaded front (drive)/rear (load)	1,896 / 1,270	2,015 / 1,244	2,247 / 1,552	2,537 / 1,488	
	2.4	Axle loading, reach out, loaded front (drive)/rear (load)	kg	602 / 3,964	610 / 4,249	631 / 5,168	688 / 5,837
	2.5	Axle loading, reach in, loaded front (drive)/rear (load)	kg	1,612 / 2,954	1,756 / 3,103	1,905 / 3,895	2,372 / 4,152
Wheels/Chassis	3.1	Tires(solid rubber, superelastic, pneumatic, polyurethane)	PE	PE	PE	PE	
	3.2	Tire size, front	305 x 140	305 x 140	345 x 140	345 x 140	
	3.3	Tire size, rear	285 x 100	285 x 100	355 x 106	355 x 135	
	3.5	Wheels, numbers(x=driven wheels), front(drive)/rear(load)	1 x / 2	1 x / 2	1 x / 2	1 x / 2	
	3.6	Track width, front (drive)	b10 (mm)	0	0	0	0
	3.7	Track width, rear (load)	b11 (mm)	1149	1149	1155	1184
	4.1	Mast / fork carriage tilt forward / backward	degrees	2 / 5	2 / 5	2 / 5	2 / 5
Basic Dimensions	4.2	Lowered mast height	h1 (mm)	2348	2348	2386	2386
	4.3	Free lift (without backrest)	h2 (mm)	1761	1761	1717	1717
	4.4	Lift height	h3 (mm)	5306	5306	5305	5305
	4.5	Extended mast height (without backrest)	h4 (mm)	5812	5812	5974	5974
	4.7	Overhead load guard (cab) height	h6 (mm)	2116	2116	2135	2135
	4.8	Seat height / standing height	h7 (mm)	922	922	942	942
	4.10	Height of wheel arms	h8 (mm)	303	303	374	374
	4.19	Overall length (reach in, fork end)	l1 (mm)	2511	2511	2595	2595
	4.20	Length to face of forks (reach in)	l2 (mm)	1311	1311	1395	1395
	4.21	Overall width	b1 / b2 (mm)	1279 / 1270	1279 / 1270	1291 / 1270	1349 / 1270
	4.22	Fork dimensions (hook type)	s / e / l (mm)	40 x 100 x 1200	40 x 100 x 1200	45 x 100 x 1200	45 x 122 x 1200
	4.23	Fork carriage ISO 2328, class / type A, B		2A	2A	2B	2B
	4.24	Fork-carriage width	b3 (mm)	800	800	800	800
	4.25	Overall fork width	b5 (mm)	732	732	732	732
	4.26	Distance between support arms	b4 (mm)	951	951	951	951
	4.28	Reach stroke	l4 (mm)	504	554	544	692
	4.31	Ground clearance, loaded, under mast	m1 (mm)	91	91	109	109
4.32	Ground clearance, center of wheelbase	m2 (mm)	56	58	71	77	
4.33	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	2749	2759	2834	2872	
4.34	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	2810	2812	2890	2900	
4.35	Turning radius	Wa (mm)	1638	1685	1742	1885	
4.37	Length across wheel arms	l7 (mm)	1790	1860	1935	2085	
Performance Data	5.1	Travel speed, unloaded	km / h	14	14	14	14
	5.2	Lift speed, loaded / unloaded	m / s	0.37 / 0.58	0.37 / 0.58	0.3 / 0.47	0.3 / 0.47
	5.3	Lowering speed, loaded / unloaded	m / s	0.5 / 0.45	0.5 / 0.45	0.5 / 0.45	0.5 / 0.45
	5.6	Max. drawbar pull, loaded/ unloaded S2 5min	N	580 / 610	570 / 600	710 / 750	700 / 750
	5.8	Max. gradient performance, loaded/ unloaded S2 5min	%	13 / 18	12 / 18	12 / 19	11 / 18
	5.10	Service brake		Electric	Electric	Electric	Electric
E-Motor	6.1	Dirve motor rating S2 60min	kW	7.5	7.5	7.5	7.5
	6.2	Lift motor rating at S2 5min	kW	14	14	14	14
	6.3	Battery acc. to DIN 43531/ 35/ 36 A, B, C, no		DIN43531	DIN43531	DIN43531	DIN43531
	6.4	Battery voltage, nominal capacity K5	V / Ah	48 / 420	48 / 420	48 / 560	48 / 560
	6.5	Battery weight(min)	kg	750	750	940	940
	Battery dimensions L / W / H	mm	1223 / 283 / 787	1223 / 283 / 787	1223 / 353 / 787	1223 / 353 / 787	
Other Details	8.1	Type of drive control		AC Mosfet	AC Mosfet	AC Mosfet	AC Mosfet
	8.2	Operating pressure for attachments	bar	160	170	170	190
	8.3	Oil volume for attachments	l / min	25	25	25	25
	8.4	Sound level at driver's ear according to DIN 12 053	db (A)	70	70	70	70



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