

# 22/25/30B-9F

Electric Counterbalance Trucks

MOVING YOU FURTHER

HYUNDAI HEAVY INDUSTRIES



- Some of the photos may include optional equipment.
- All lamps are optional.

 **HYUNDAI**  
HEAVY INDUSTRIES

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# Your satisfaction is **our priority!**

Hyundai introduces a new line of **9F-series** battery forklift trucks.

These Forklifts are designed to achieve optimized performance for every working environment with better economic advantage. They will surely meet the best satisfaction.

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- Some of the photos may include optional equipment.
- All lamps are optional.

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### Compact forklift with proven AC technology

- Optimized performance
- Comfortable operating room
- Battery side loading system (Optional)
- Curve control system

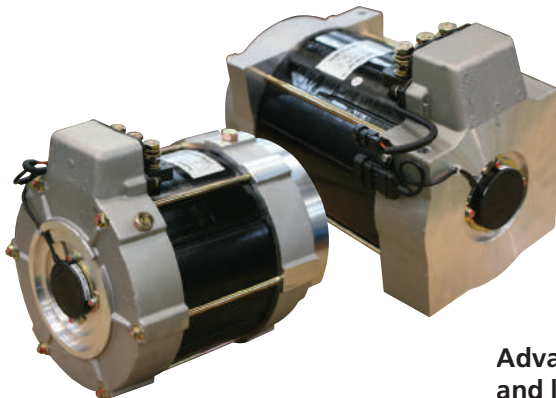




# High Efficiency & Optimal Performance



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- All lamps are optional.



## Advanced drive and lift performance with proven durability and low maintenance

The enclosed drive and pump motor with AC technology combine power, high maintenance intervals and excellent durability.

The brushless AC motors offer improved efficiency and reduction maintenance cost.

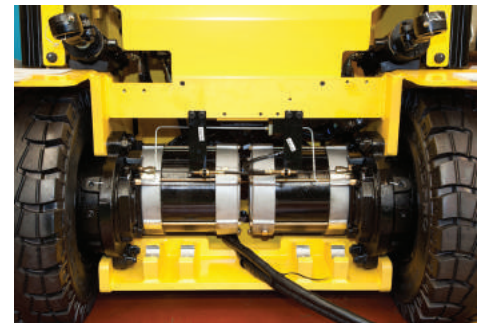
Advanced technology enables smooth operation and optimal performance with safety.

## 22/25/30B-9F



### Curve control

Curve Control limits travel speed based on turning radius, reducing speed for a smooth, precise turning operation for the driver.



### Dual drive system

Using a dual drive system will minimize aisle width and energy consumption.

- Some of the photos may include optional equipment.
- All lamps are optional.



### Max. Gradeability (loaded)

Model	%
22B-9F	19
25B-9F	18
30B-9F	17

### Max. Travel Speed (Unloaded)

Model	Km / h
22B-9F	15
25B-9F	15
30B-9F	15

### Anti roll back system, travel speed and gradeability

Anti Roll-back system offers protection against the machine rolling back on a ramp in combination with exceptional ramp start capabilities.

# Advanced **Safety**



## **Excellent visibility for safe operation**

Optimized lift cylinder arrangement provides operator with wider visibility. The panoramic mirror expands the driver's view when backing up.

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## **Panoramin mirror**

The panoramic mirror expands the driver's view when backing up.

## **Strong overhead guard**

Exceeding ISO6055 and ANSI regulations, the overhead guard offers great protection combined with excellent all around visibility.



The safely designed driver's space makes your operating more comfortable.

## 22/25/30B-9F

### Fork safety features

When the forks are being lowered, a down-control valve maintains the controlled speed. The down-safety valve prevents forks from dropping down in case of sudden damage of hydraulic line.

### OPSS(Operator Presence Sensing System)

When the operator is not in the seat all mast and drive movements are impossible.

Lift Lock   Tilt Lock   Drive Lock



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- All lamps are optional.



### Safety lamps (Option) & rear reflectors

Rear combination lights and halogen headlights offer the driver visibility in all circumstance. Rear reflectors mounted on the counterweight enhance safety for the driver and the application.

# Optimised Ergonomics & Fast and Easy Maintenance



## Spacious operator cabin

The newly designed cabin was conceived for more space, a wider field of view and operator comfort.

■ Some of the photos may include optional equipment.

■ All lamps are optional.



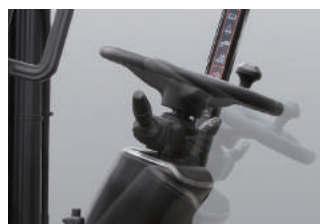
## Optimized pedal position and floor mat

The position of accelerator and brake pedal have been optimized through human engineering.



## Large entrance step

Wide and non-slip step offers convenience and safety when entering and exiting truck.



## Adjustable steering wheel

To achieve a comfortable drive position, the angle of the steering column can easily be adjusted through a lever on the right-hand side of the steering column.



## Comfortable full suspension Grammer Seat (Optional)

Easily adjustable suspension seat, based on a human engineering design, reduces operator fatigue and provides greater comfort.

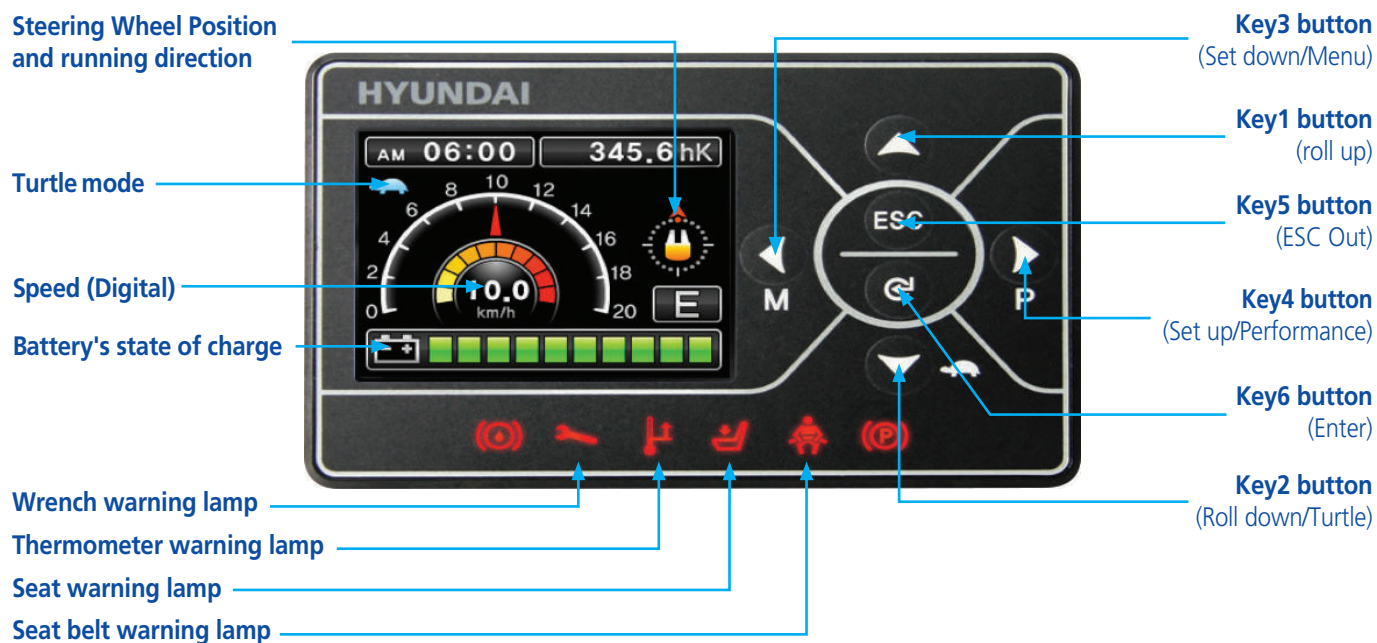
- ELR (Energy Locking Retractor) Type Seat Belt
- Heating and Head-rest
- Movable Armrests



An ideal arrangement of components ensures easy access and convenience for maintenance.

## 22/25/30B-9F

### Advanced LCD Monitor



The LCD color monitor with 3.5 inch graphic smart display allows the operator to easily and efficiently control the machine. The monitor provides information about speed & accelerator level, steer angle & travel direction, battery discharge indicator, hour meter & working mode. The operator can select various performance modes to meet all working conditions. It is available multi-languages (maximum 11) for operator.

The monitor also displays information about operation error, system fault, battery level, hour meter plus other various functions. It enables the operator to maintain the forklift in optimum operating condition.

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

**Turtle mode**



### Easy battery replacement (Optional)

The battery compartment is equipped with a side battery removal assembly for easy removal and replacement.



### Brake oil reservoir with level sensor

The enhanced brake oil reservoir, located in the upper left dash, is equipped with an electronic level sensor and easily visible through the monitor.

# New 9 Series

## Mast Specification (22/25B-9F)

Mast Type	Maximum Fork Height	Overall Height (Lowered) (mm)	Free Lift Height (mm)			Tilt Angle (deg) Fwd / Bwd	Load Capacity without side shift at (500mm LC)(kg)		Load Capacity with side shift at (500mm LC)(kg)		Truck Weight (Unloaded) (kg)		
			With Load Backrest	Without Load Backrest			22B-9F	25B-9F	22B-9F	25B-9F	22B-9F	25B-9F	
			22/25B-9F	22B-9F	25B-9F								
2-Stage Limited free lift	* V300	3005	2012	115	115	115	6 / 10	2200	2500	2200	2500	3965	4160
	V330	3305	2162	115	115	115	6 / 10	2200	2500	2200	2500	3988	4183
	V350	3505	2262	115	115	115	6 / 10	2200	2500	2200	2500	4002	4197
	V370	3705	2412	115	115	115	6 / 10	2200	2500	2200	2475	4024	4219
	V400	4005	2562	115	115	115	6 / 10	2200	2500	2200	2425	4046	4241
	V430	4305	2712	115	115	115	6 / 6	2200	2450	2200	2375	4094	4289
	V450	4505	2862	115	115	115	6 / 6	2200	2400	2175	2325	4124	4319
	V470	4705	2962	115	115	115	6 / 6	2200	2360	2125	2285	4139	4334
	V500	5005	3112	115	115	115	6 / 6	2150	2350	2075	2275	4161	4356
2-Stage full free lift	VF295	2976	2012	832	1379	1379	6 / 6	2200	2500	2200	2500	4012	4207
	VF325	3276	2162	982	1529	1529	6 / 6	2200	2500	2200	2500	4045	4240
	VF345	3476	2262	1082	1629	1629	6 / 6	2200	2500	2175	2475	4067	4262
3-Stage full free lift	TF370/TS370	3705	1812	632	1122	1179	6 / 6	2200	2500	2200	2475	4143	4338
	TF400/TS400	4005	1912	732	1222	1279	6 / 6	2200	2500	2200	2425	4164	4359
	TF430/TS430	4305	2012	832	1322	1379	6 / 6	2200	2450	2200	2375	4186	4381
	TF450/TS450	4505	2112	932	1422	1479	6 / 6	2200	2400	2175	2325	4208	4403
	TF470/TS470	4705	2162	982	1472	1529	6 / 6	2200	2350	2125	2275	4220	4415
	TF500/TS500	5005	2262	1082	1572	1629	6 / 6	2150	2300	2075	2225	4244	4439
	TF550/TS550	5505	2462	1282	1772	1829	6 / 6	2100	2200	2025	2125	4285	4480
	TF600/TS600	6005	2662	1482	1972	2029	6 / 6	2000	2150	1925	2075	4324	4519
	TF650/TS650	6505	2862	1682	2172	2172	3 / 3	1650	1800	1575	1725	4363	4558
TF700/TS700	7005	3062	1882	2372	2372	3 / 3	1200	1400	1125	1325	4399	4594	
4-Stage full free lift	QF610	6115	2147	967	1514	1514	3 / 3	1550	1650	1475	1575	4538	4733
	QF660	6615	2347	1167	1714	1714	3 / 3	1450	1550	1375	1475	4598	4793
	QF700	7015	2447	1267	1814	1814	3 / 3	1250	1300	1175	1225	4628	4823
	QF745	7465	2597	1417	1964	1964	3 / 3	1150	1200	1075	1125	4674	4869
	QF790	7915	2747	1567	2114	2114	3 / 3	700	750	625	675	4774	4969

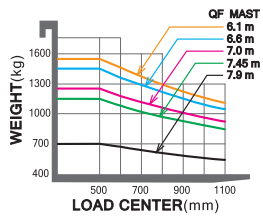
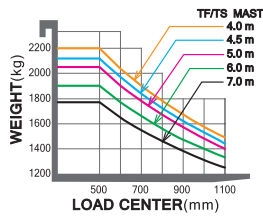
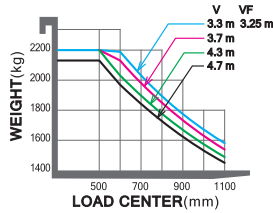
## Mast Specification (30B-9F)

Mast Type	Maximum Fork Height	Overall Height (Lowered) (mm)	Free Lift Height (mm)		Tilt Angle (deg) Fwd / Bwd	Load Capacity without side shift at (500mm LC)(kg)		Load Capacity with side shift at (500mm LC)(kg)		Truck Weight (Unloaded) (kg)		
			With Load Backrest	Without Load Backrest		30B-9F	30B-9F	30B-9F	30B-9F			
			30B-9F	30B-9F								
2-Stage Limited free lift	* V300	3005	2012	115	115	6 / 10	3000	3000	3000	3000	4604	
	V330	3305	2162	115	115	6 / 10	3000	3000	3000	3000	4623	
	V350	3505	2262	115	115	6 / 10	3000	3000	3000	3000	4640	
	V370	3705	2412	115	115	6 / 10	3000	3000	3000	3000	4662	
	V400	4005	2562	115	115	6 / 10	3000	3000	3000	3000	4684	
	V430	4305	2712	115	115	6 / 6	3000	3000	3000	3000	4733	
	V450	4505	2862	115	115	6 / 6	3000	3000	2950	2950	4763	
	V470	4705	2962	115	115	6 / 6	3000	3000	2875	2875	4777	
	V500	5005	3112	115	115	6 / 6	2900	2900	2775	2775	4799	
2-Stage full free lift	VF295	2976	2012	832	1379	1379	6 / 6	3000	3000	3000	4661	
	VF325	3276	2162	982	1529	1529	6 / 6	3000	3000	2950	2950	4694
	VF345	3476	2262	1082	1567	1567	6 / 6	3000	3000	2875	2875	4682
3-Stage full free lift	TF370/TS370	3705	1812	632	1117	1117	6 / 6	3000	3000	3000	3000	4769
	TF400/TS400	4005	1912	732	1217	1217	6 / 6	3000	3000	3000	3000	4791
	TF430/TS430	4305	2012	832	1317	1317	6 / 6	3000	3000	2950	2950	4811
	TF450/TS450	4505	2112	932	1417	1417	6 / 6	3000	3000	2875	2875	4838
	TF470/TS470	4705	2162	982	1467	1467	6 / 6	2950	2950	2825	2825	4853
	TF500/TS500	5005	2262	1082	1567	1567	6 / 6	2900	2900	2775	2775	4879
	TF550/TS550	5505	2462	1282	1767	1767	6 / 6	2800	2800	2675	2675	4921
	TF600/TS600	6005	2662	1482	1967	1967	6 / 6	2700	2700	2575	2575	4962
	TF650/TS650	6505	2862	1682	2167	2167	3 / 3	2250	2250	2125	2125	5002
TF700/TS700	7005	3062	1882	2367	2367	3 / 3	1850	1850	1725	1725	5043	
4-Stage full free lift	QF610	6115	2147	967	1514	1514	3 / 3	1800	1800	1675	1675	5144
	QF660	6615	2347	1167	1714	1714	3 / 3	1700	1700	1575	1575	5203
	QF700	7015	2447	1267	1814	1814	3 / 3	1400	1400	1275	1275	5234
	QF745	7465	2597	1417	1964	1964	3 / 3	1250	1250	1125	1125	5280
	QF790	7915	2747	1567	2114	2114	3 / 3	750	750	625	625	5380

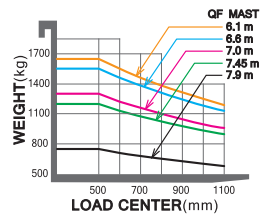
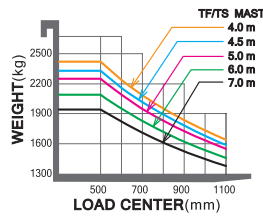
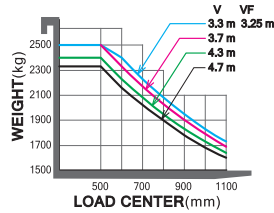
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## Load Capacity

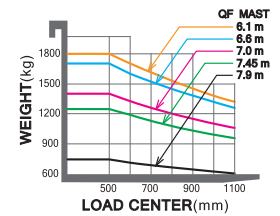
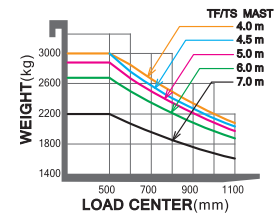
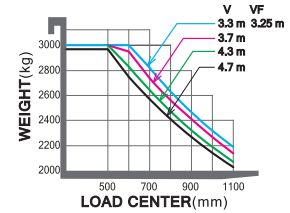
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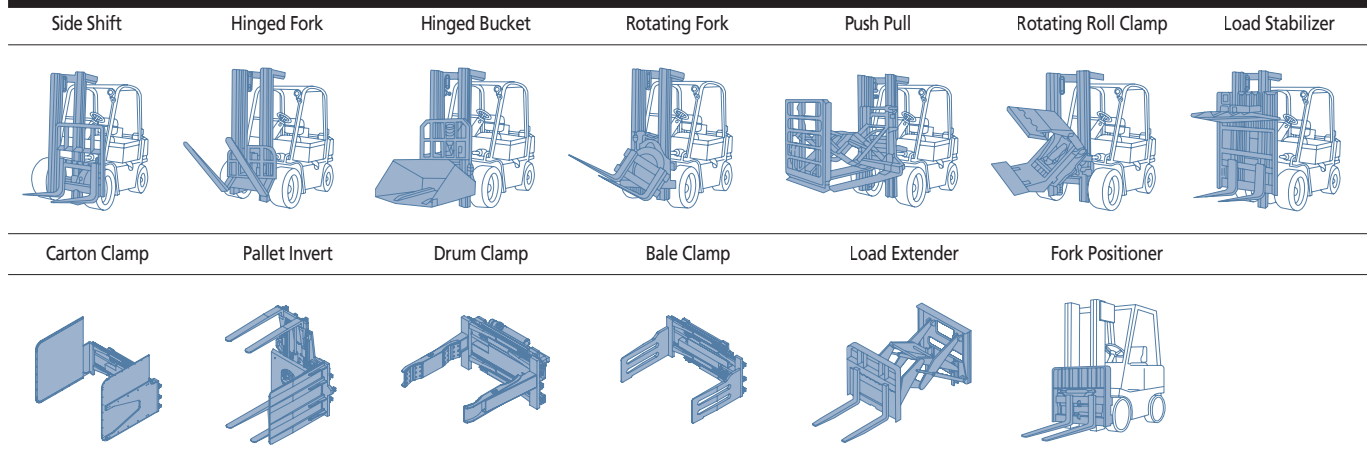
25B-9F



30B-9F



## Various Attachments



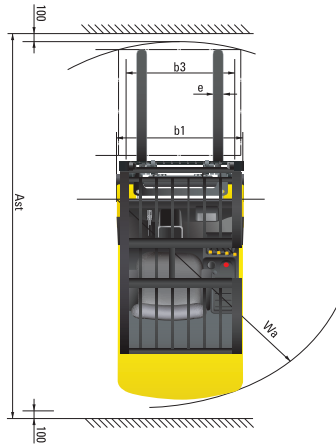
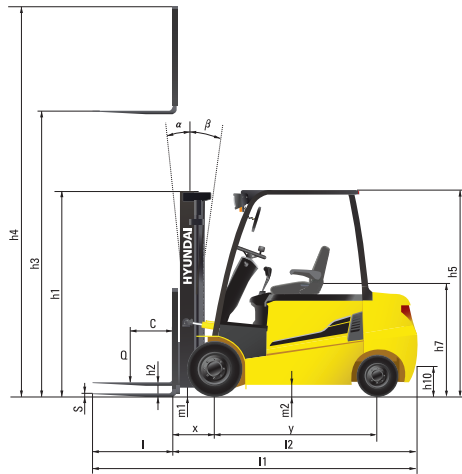
## Optional Items

- Fork(mm)  
22/ 25B-9F : 900, 1000, 1050(STD), 1200, 1350, 1500, 1650, 1800  
30B-9F : 900, 1050(STD), 1150, 1200, 1650, 1800, 1970, 2120, 2300, 2400
- Overshoe(mm)  
22/ 25B-9F : 1300, 1500, 1700, 1800  
30B-9F : 1500, 1700, 1800
- Integral Sideshift, Fork Positioner, Integral Fork Positioner with Sideshift
- Tire : Solid(STD)/ Pneumatic / Non-marking  
Wide tire[22/25/30B-9F : Front tire (23x10-12)]
- Seat : Semi suspension seat (STD)  
Full suspension seat (Armrest, Backrest extension, Heating, Buckle S/W)
- Cold Storage

- M.C.V : 2-Spool (STD), 3-Spool, 4-Spool
- Beacon Lamp
- Work Lamp and Rear Combination Lamp
- Side Mirror
- OPSS : Mast
- Load Backrest (LBR)



## Dimension



## Specification

### Identification

		HYUNDAI			
1. 1	Manufacturer	HYUNDAI			
1. 2	Manufacturer's type designation	22B-9F	25B-9F	30B-9F	
1. 3	Drive : electric (battery or mains), diesel, petrol, fuel gas, manual	electric	electric	electric	
1. 4	Type of operation : hand, pedestrian, standing, seated, order - picker	seated	seated	seated	
1. 5	Load capacity / rated load	Q kg	2,200	2,500	3,000
1. 6	Load center distance	c mm	500	500	500
1. 8	Load distance, center of drive axle to fork	x mm	458	458	458
1. 9	Wheelbase	y mm	1,400	1,400	1,600

### Weights

2. 1	Service weight	kg	3,965	4,160	4,604
2. 2	Axle loading, loaded front / rear	kg	5,368 / 797	5,836 / 824	6,630 / 974
2. 3	Axle loading, unloaded front / rear	kg	1,663 / 2,302	1,625 / 2,535	1,834 / 2,770

### Wheels, Chassis

3. 1	Tires : solid rubber(V), superelastic(SE), pneumatic(P), polyurethane(PE)	SE, P	SE, P	SE, P
3. 2	Tires size, front(Φ x width)	23X9-10	23X9-10	23X9-10
3. 3	Tires size, rear(Φ x width)	18X7-8	18X7-8	18X7-8
3. 5	Wheels, number front rear(x = driven wheels)	2x2	2x2	2x2
3. 6	Track width, front	mm	993	993
3. 7	Track width, rear	mm	980	980

### Basic Dimensions

4. 1	Mast / fork carriage tilt forward / backward	degrees	6/10	6/10	6/10
4. 2	Lowered mast height	h1 mm	2,012	2,012	2,012
4. 3	Free lift height	h2 mm	115	115	115
4. 4	Lift height	h3 mm	3,005	3,005	3,005
4. 5	Extended mast height	h4 mm	4,185	4,185	4,185
4. 7	Overhead guard (cab) height	h5 mm	2,230	2,230	2,230
4. 8	Seat height / Standing height	h7 mm	1,275	1,275	1,275
4. 12	Coupling height	h10 mm	325	325	325
4. 19	Overall length	l1 mm	3,345	3,345	3,553
4. 20	Length to face of forks	l2 mm	2,295	2,295	2,503
4. 21	Overall width	b1 mm	1,200	1,200	1,200
4. 22	Fork dimensions	s / e / l mm	45x100x1,050	45x100x1,050	45x122x1,050
4. 23	Fork carriage ISO 2328, class / type A, B		III/A	II/A	III/A
4. 24	Fork - carriage width	b3 mm	1,102	1,102	1,102
4. 31	Ground clearance, loaded, under mast	m1 mm	117	117	117
4. 32	Ground clearance, centre of wheelbase	m2 mm	130	130	130
4. 33	Aisle width for pallets 1,000 x 1,200 crossways	Ast mm	3,637	3,637	3,829
4. 34	Aisle width for pallets 800 x 1,200 lengthways	Ast mm	3,803	3,803	4,009
4. 35	Turning radius	Wa mm	1,939	1,939	2,164
4. 36	Smallest pivot point distance	mm	257	257	350

### Performance Data

5. 1	Travel speed, loaded/ unloaded(48V)	km/h	14 / 15	14 / 15	14 / 15
5. 2	Lift speed, loaded/ unloaded(48V)	mm/s	340 / 500	340 / 500	290 / 400
5. 3	Lowering speed, loaded/unloaded	mm/s	500 / 270	500 / 270	500 / 270
5. 6	Max. drawbar pull, loaded/ unloaded S2 5min	N	12,640 / 12,530	12,640 / 12,460	12,490 / 12,430
5. 8	Max. gradient performance, loaded/ unloaded S2 5min	%	19 /	18 /	17 /
5. 10	Service brake		Hydraulic	Hydraulic	Hydraulic

### E - Motor

6. 1	Drive motor rating S2 60 min (48V)	kW	4.7x2	4.7x2	4.7x2
6. 2	Pump motor rating at S3 - 15 % (48V)	kW	17	17	17
6. 4	Battery voltage, nominal capacity K5 (48V)	Ah	600	600	660
6. 5	Battery weight	kg	1,020	1,020	1,150
	Battery compartment dimensions L / W / H	mm	1,035 / 806 / 540	1,035 / 806 / 540	1,035 / 1,000 / 540

### Other Details

8. 1	Type of drive control	AC	AC	AC
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- The Specifications in this brochure are subject to change for option.
- The options in this brochure are subject to change to improve the performance of the forklift.

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2016. 06 Rev. 1