

22/25/30/32/35B-9

Electric Counterbalance Trucks

MOVING YOU FURTHER

HYUNDAI HEAVY INDUSTRIES



 **HYUNDAI**

Your satisfaction is **our priority!**

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

The newly designed 4 wheel counterbalance trucks provide every operator comfortable driving, increased productivity and easy maintenance.



■ Some of the photos may include optional equipment.

Compact forklift with proven AC technology

- Maximum performance
- Comfortable operating room
- Battery side loading system
- Curve control system
- Weight indicator
- Fingertip controlled mini levers available (optional)



High Efficiency & Optimal Performance



More efficient operating control levers (Optional)

Electronic directional control and secondary horn are mounted to the hydraulic lift lever for quick and precise maneuvering.

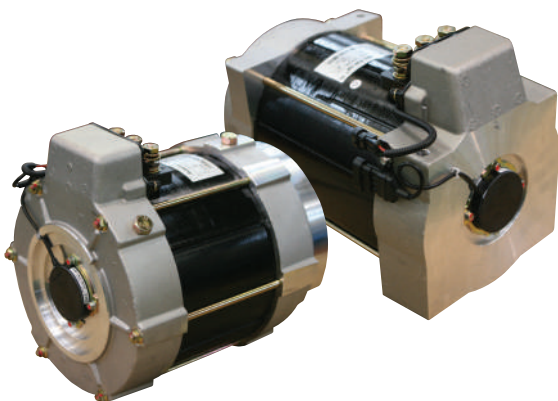


Finger tip control levers (Optional)

The finger tip control lever allows more precise control and fatigue-free working. The ergonomically designed armrest can be adjusted up, down, forward and backward for various operator's body type.



■ Some of the photos may include optional equipment.



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 reduced maintenance cost.

Efficient, smooth running and powerful performance make your work more productive.

22/25/30/32/35B-9



■ Some of the photos may include optional equipment.



Auto fork leveling system (Optional)

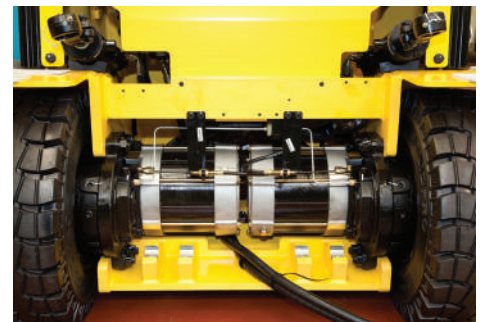
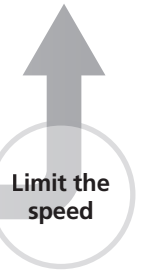
In order to improve productivity the auto fork leveling system will automatically stop the tilt movement when the mast is in a straight position.

Curve control

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



Driving Speed



Dual drive system

The dual drive system enhances the operator's ability to maneuver in small aisle widths with minimum energy consumption. Additionally, the drive units and AC motors integrated in the front axle provide the operator with improved gradient capacity.



Max. Gradeability (loaded)

Model	%
22B-9	34
25B-9	31
30B-9	27
32B-9	26
35B-9	23

Max. Travel Speed (Unloaded)

Model	mph
22B-9	11
25B-9	11
30B-9	11
32B-9	11
35B-9	11

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**



■ Some of the photos may include optional equipment.

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.



Panoramic mirror

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

Strong overhead guard

Exceeding CEE 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.

22/25/30/32/35B-9



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

■ Some of the photos may include optional equipment.



Safety lamps & rear reflectors

LED combination lights and halogen headlights offer the driver visibility in all circumstances. Rear reflectors mounted on the counterweight enhance safety for the driver and the work area.

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.



Optimized pedal position and floor mat

The position of accelerator and throttle have been enhanced 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.



Grammer seat

Based on a human engineering design, the easily adjustable suspension seat provides greater comfort reducing operator fatigue.

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

22/25/30/32/35B-9



■ Some of the photos may include optional equipment.

Easy battery replacement

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



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 lever, steer angle & travel direction, battery discharge indicator, hour meter & working mode. The optional load indicator displays the load weight in the monitor. The operator can select various performance modes to meet all working conditions. It is available in multiple languages (maximum 12) for operator.

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

Turtle mode

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 (22/25/30B-9)

Mast Type	Maximum Fork Height (in)	Overall Height (Lowered) (in)	Free Lift Height (in)			Tilt Angle (deg) Fwd / Bwd	Load Capacity without side shift at (24in LC)(lb)			Load Capacity with side shift at (24in LC)(lb)			Truck Weight (Unloaded) (lb)				
			With Load Backrest	Without Load Backrest			22/25/30B-9	22B-9	25B-9	30B-9	22B-9	25B-9	30B-9	22B-9	25B-9	30B-9	
				22/25/30B-9	22B-9												25B-9
2-Stage Limited free lift	V300	118	79	4.5	4.5	4.5	4.5	6 / 10	4,400	5,000	6,000	4,400	5,000	6,000	8,879	9,463	10,046
	* V330	130	85	4.5	4.5	4.5	4.5	6 / 10	4,400	5,000	6,000	4,400	5,000	6,000	8,922	9,506	10,093
	V350	138	89	4.5	4.5	4.5	4.5	6 / 10	4,400	5,000	6,000	4,400	5,000	6,000	8,960	9,544	10,133
	V370	146	95	4.5	4.5	4.5	4.5	6 / 10	4,400	5,000	6,000	4,400	5,000	6,000	9,008	9,592	10,185
	V400	158	101	4.5	4.5	4.5	4.5	6 / 10	4,400	5,000	6,000	4,400	5,000	6,000	9,056	9,640	10,237
	V430	170	107	4.5	4.5	4.5	4.5	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,164	9,748	10,348
	V450	177	113	4.5	4.5	4.5	4.5	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,229	9,814	10,418
2-Stage full free lift	V470	185	117	4.5	4.5	4.5	4.5	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,261	9,845	10,452
	V500	197	123	4.5	4.5	4.5	4.5	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,310	9,894	10,504
	VF295	117	79	33	54	54	54	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,012	9,596	10,124
	VF325	129	85	39	60	60	60	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,084	9,668	10,196
3-Stage full free lift	VF345	137	89	43	64	64	62	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,133	9,717	10,251
	TF370/TS370	146	71	25	44	46	44	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,201	9,786	10,407
	TF400/TS400	158	75	29	48	50	48	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,245	9,829	10,453
	TF430/TS430	170	79	33	52	54	52	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,291	9,876	10,551
	TF450/TS450	177	83	37	56	58	56	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,338	9,923	10,561
	TF470/TS470	185	85	39	58	60	58	6 / 6	4,400	5,000	6,000	4,400	5,000	6,000	9,363	9,947	10,588
	TF500/TS500	197	89	43	62	64	62	6 / 6	4,400	5,000	6,000	4,400	4,900	6,000	9,417	10,002	10,643
	TF550/TS550	217	87	51	70	72	70	6 / 6	4,400	4,850	6,000	4,400	5,680	5,900	9,503	70,087	10,739
	TF600/TS600	236	105	58	78	80	77	6 / 6	4,400	4,740	5,950	4,240	4,570	5,670	9,585	10,169	10,832
	TF650/TS650	256	113	66	86	86	85	3 / 3	3,600	3,950	4,950	3,500	3,800	4,700	9,698	10,282	10,944
TF700/TS700	276	121	74	93	93	93	3 / 3	2,600	3,100	4,100	2,500	2,900	3,800	9,771	10,355	11,016	
4-Stage full free lift	QF610	241	85	38	60	60	60	3 / 3	3,400	3,630	3,960	3,250	3,470	3,690	10,170	10,755	11,268
	QF660	260	92	46	68	68	68	3 / 3	3,190	3,410	3,750	3,030	3,250	3,470	10,302	10,886	11,399
	QF700	276	96	50	71	71	71	3 / 3	2,750	2,860	3,080	2,590	2,700	2,810	10,369	10,953	11,466
	QF745	294	102	56	77	77	77	3 / 3	2,530	2,640	2,750	2,370	2,480	2,480	10,470	11,055	11,567
	QF790	312	108	62	83	83	83	3 / 3	1,540	1,650	1,650	1,370	1,480	1,370	10,692	11,276	11,789

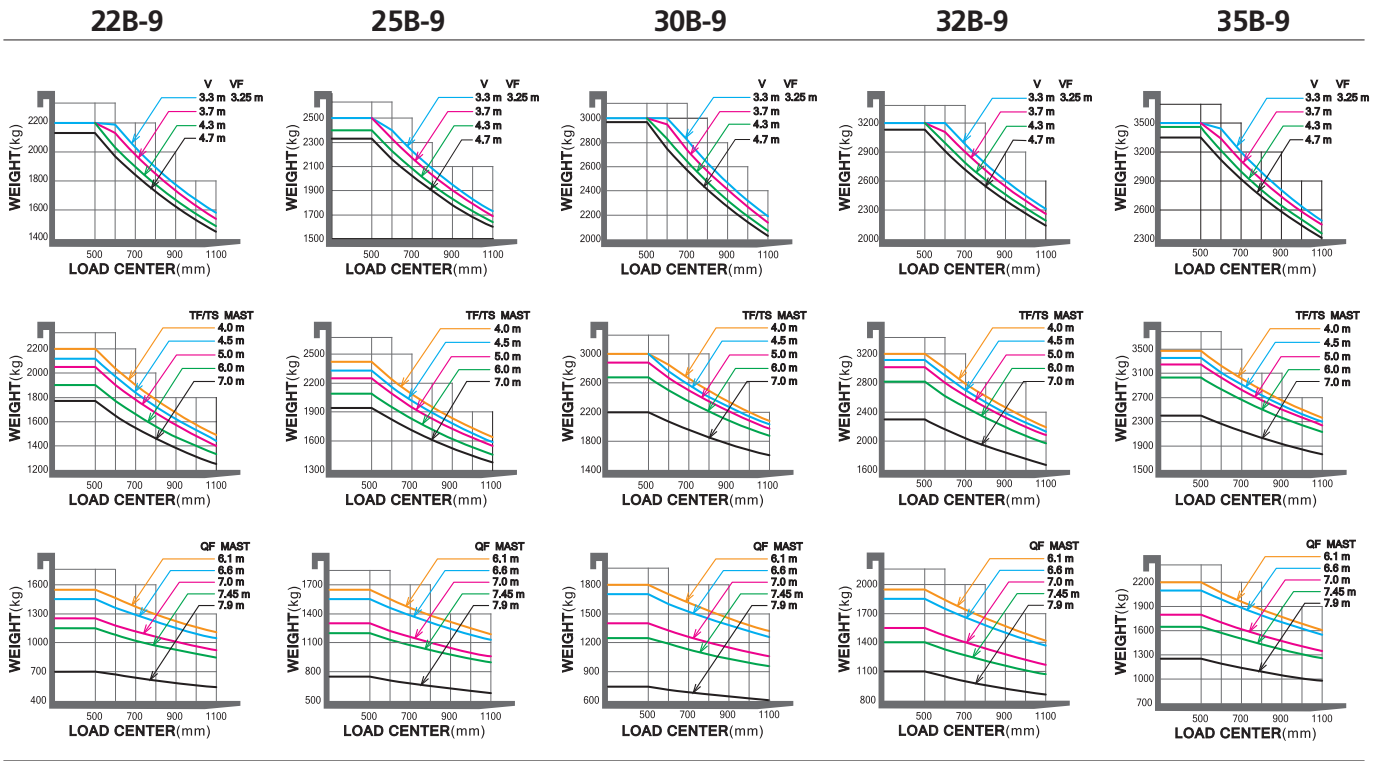
Mast Specification (32/35B-9)

Mast Type	Maximum Fork Height (in)	Overall Height (Lowered) (in)		Free Lift Height (mm)				Tilt Angle (deg) Fwd / Bwd	Load Capacity without side shift at (24in LC)(lb)		Load Capacity with side shift at (24in LC)(lb)		Truck Weight (Unloaded) (lb)		
		32B-9	35B-9	With Load Backrest		Without Load Backrest			32B-9	35B-9	32B-9	35B-9	32B-9	35B-9	
				32B-9	35B-9	32B-9	35B-9								
2-Stage Limited free lift	V300	118	82	82	4.5	4.5	4.5	4.5	6 / 10	6,500	7,000	7,055	7,000	10,495	11,029
	* V330	130	88	88	4.5	4.5	4.5	4.5	6 / 10	6,500	7,000	7,055	7,000	10,542	11,076
	V350	138	92	92	4.5	4.5	4.5	4.5	6 / 10	6,500	7,000	6,779	7,000	10,583	11,117
	V370	146	98	98	4.5	4.5	4.5	4.5	6 / 10	6,500	7,000	6,757	7,000	10,636	11,170
	V400	158	104	104	4.5	4.5	4.5	4.5	6 / 10	6,500	7,000	6,603	7,000	10,689	11,222
	V430	170	110	110	4.5	4.5	4.5	4.5	6 / 6	6,500	7,000	6,448	7,000	10,801	11,334
	V450	177	115	116	4.5	4.5	4.5	4.5	6 / 6	6,500	7,000	6,338	7,000	10,870	11,404
2-Stage full free lift	V470	185	119	120	4.5	4.5	4.5	4.5	6 / 6	6,500	7,000	6,250	7,000	10,905	11,439
	V500	197	125	126	4.5	4.5	4.5	4.5	6 / 6	6,500	7,000	6,118	6,950	10,958	11,491
	VF295	117	82	82	36	36	54	54	6 / 6	6,500	7,000	7,055	7,000	10,615	11,149
	VF325	129	88	88	42	42	60	60	6 / 6	6,500	7,000	7,055	7,000	10,666	11,199
3-Stage full free lift	VF345	137	88	88	46	46	64	64	6 / 6	6,500	7,000	6,779	7,000	10,724	11,257
	TF370/TS370	146	74	75	28	28	44	46	6 / 6	6,500	7,000	6,500	7,000	10,939	11,473
	TF400/TS400	158	78	79	32	32	48	50	6 / 6	6,500	7,000	6,500	7,000	10,987	11,521
	TF430/TS430	170	82	82	36	36	52	54	6 / 6	6,500	7,000	6,470	7,000	11,042	11,575
	TF450/TS450	177	86	86	39	40	56	58	6 / 6	6,500	7,000	6,360	7,000	11,096	11,630
	TF470/TS470	185	88	88	41	42	57	60	6 / 6	6,500	7,000	6,290	7,000	11,295	11,829
	TF500/TS500	197	92	92	45	46	62	64	6 / 6	6,440	7,000	6,160	6,940	11,183	11,716
	TF550/TS550	217	100	100	53	54	69	72	6 / 6	6,210	6,940	5,940	6,610	11,280	11,813
	TF600/TS600	236	108	108	61	62	77	80	6 / 6	6,020	6,830	5,740	6,500	11,375	11,908
	TF650/TS650	256	115	116	69	69	85	88	3 / 3	5,000	5,750	4,800	5,400	11,488	12,022
4-Stage full free lift	TF700/TS700	176	123	124	77	77	93	96	3 / 3	4,200	4,850	2,900	4,500	11,563	12,094
	QF610	241	84	85	38	38	60	60	3 / 3	4,000	5,510	3,710	5,180	11,766	12,300
	QF660	260	92	92	46	46	68	68	3 / 3	3,770	5,290	3,490	4,960	11,899	12,433
	QF700	276	96	96	50	50	71	71	3 / 3	3,130	4,630	2,850	4,300	11,965	12,498
	QF745	294	102	102	56	56	77	77	3 / 3	1,960	4,300	1,690	3,970	12,059	12,592
QF790	312	108	108	62	62	83	83	3 / 3	1,100	3,200	830	2,860	12,288	12,821	

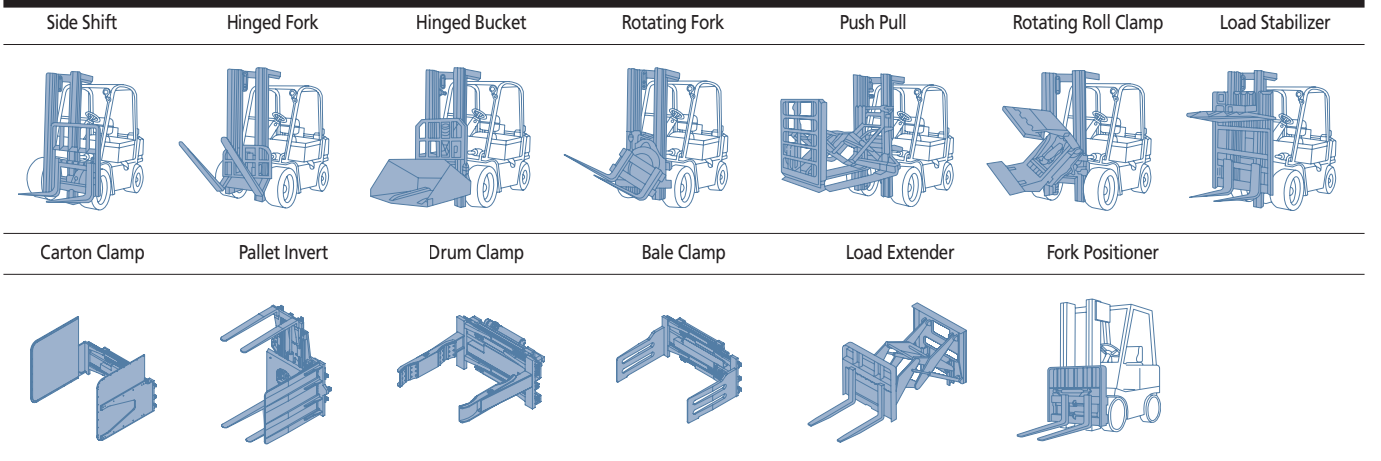
* TS-Mast : Wide Visible 3-Stage Full Free Lift Mast with 2 Free Lift Cylinders.

* Standard

Load Capacity



Various Attachments

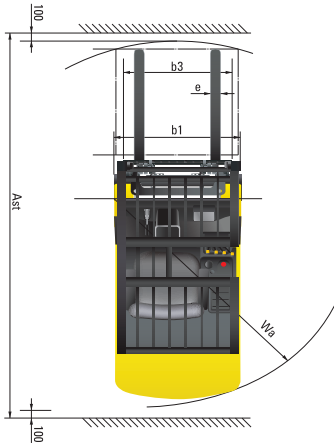
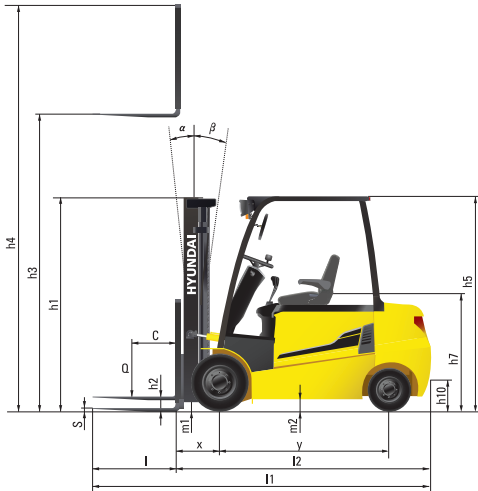


Optional Items

- Fork(in)
22/ 25B-9 : 35, 39, 41(STD), 47, 53, 59, 65, 71
30/32/35B-9 : 35, 41(STD), 45, 47, 65, 71 78, 83, 91, 94
- Integral Sideshift
- Tire : Solid(STD)/ Pneumatic / Non-marking
Wide tire[22/25/30/32B-9 : Front tire (23x10-12)]
- Finger Tip Control
- Cold Storage
- M.C.V : 2-Spool (STD), 3-Spool, 4-Spool
- Auto Fork Leveling

- Beacon Lamp
- Work Lamp
- UL : ES, EE
- Enclosed cab with Heater

Dimension



Specification

Identification

		HYUNDAI				
1. 1	Manufacturer					
1. 2	Manufacturer's type designation	22B-9	25B-9	30B-9	32B-9	35B-9
1. 3	Drive : electric(battery or mains), diesel, petrol, fuel gas, manual	electric	electric	electric	electric	electric
1. 4	Type of operation : hand, pedestrian, standing, seated, order - picker	seated	seated	seated	seated	seated
1. 5	Load capacity / rated load	Q lb	4,400	5,000	6,000	7,000
1. 6	Load center distance	c in	24	24	24	24
1. 8	Load distance, center of drive axle to fork	x in	458	458	458	470
1. 9	Wheelbase	y in	1,400	1,400	1,600	1,600

Weights

2. 1	Service weight	lb	8,918	9,502	10,472	10,880	11,442
2. 2	Axle loading, loaded front / rear	lb	11,905/1,863	13,073/1,940	14,859/2,227	15,609/2,326	16,733/2,425
2. 3	Axle loading, unloaded front / rear	lb	3,373 / 5,181	3,792 / 5,710	4,277 / 6,195	4,332 / 6,548	4,343 / 7,099

Wheels, Chassis

3. 1	Tires : solid rubber(V), superelastic(SE), pneumatic(P), polyurethane(PE)		SE, P	SE, P	SE, P	SE, P	SE, P
3. 2	Tires size, front(Φ x width)		23X9-10	23X9-10	23X9-10	23X9-10	23X10-12
3. 3	Tires size, rear(Φx width)		18X7-8	18X7-8	18X7-8	18X7-8	18X7-8
3. 5	Wheels, number front rear(x = driven wheels)		2x/2	2x/2	2x/2	2x/2	2x/2
3. 6	Track width, front	in	39	39	39	39	40
3. 7	Track width, rear	in	39	39	39	39	39

Basic Dimensions

4. 1	Mast / fork carriage tilt forward / backward	degrees	6/10	6/10	6/10	6/10	6/10
4. 2	Lowered mast height	h1 in	85	2,162	2,162	2,232	2,243
4. 3	Free lift height	h2 in	4.5	115	115	115	115
4. 4	Lift height	h3 in	130	3,300	3,300	3,300	3,300
4. 5	Extended mast height	h4 in	177	4,485	4,485	4,485	4,485
4. 7	Overhead guard (cab) height	h5 in	88	2,230	2,230	2,230	2,230
4. 8	Seat height / Standing height	h7 in	47	1,180	1,180	1,180	1,180
4. 12	Coupling height	h10 in	13	325	325	325	325
4. 19	Overall length	l1 in	132	3,345	3,538	3,553	3,640
4. 20	Length to face of forks	l2 in	90	2,295	2,488	2,503	2,590
4. 21	Overall width	b1 in	47	1,200	1,200	1,200	1,250
4. 22	Fork dimensions	s / e / l in	41x3.9x1.8	41x3.9x1.8	41x4.8x1.8	41x4.8x1.8	41x4.8x1.8
4. 23	Fork carriage ISO 2328, class / type A, B		II/A	II/A	III/A	III/A	III/A
4. 24	Fork - carriage width	b3 in	43	43	43	43	43
4. 31	Ground clearance, loaded, under mast	m1 in	4.6	4.6	4.6	4.6	128
4. 32	Ground clearance, centre of wheelbase	m2 in	5.1	5.1	5.1	5.1	5
4. 33	Aisle width for pallets 1,000 x 1,200 crossways	Ast in	143	143	151	151	153
4. 34	Aisle width for pallets 800 x 1,200 lengthways	Ast in	150	150	158	158	161
4. 35	Turning radius	Wa in	76	76	85	85	87
4. 36	Smallest pivot point distance	in	10	10	10	10	10

Performance Data

5. 1	Travel speed, loaded/unloaded(48V)	mph	10.6 / 11.2	10.6 / 11.2	10.6 / 11.2	10.6 / 11.2	10.6 / 11.2
	(36V)	mph	8.1 / 9.3	8.1 / 9.3	8.1 / 9.3	8.1 / 9.3	8.1 / 9.3
5. 2	Lift speed, loaded/ unloaded(48V)	ft/min	83 / 120	81 / 120	67 / 98	65 / 98	59 / 91
	(36V)	ft/min	61 / 98	59 / 98	49 / 81	47 / 81	41 / 81
5. 3	Lowering speed, loaded/unloaded	ft/min	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89
5. 6	Max. drawbar pull, loaded/ unloaded S2 5min	N	20,310 / 19,910	20,370 / 19,840	20,230 / 19,820	20,170 / 19,790	19,210 / 19,010
5. 8	Max. gradient performance, loaded/ unloaded S2 5min	%	34 / 20	31 / 18	27 / 18	26 / 17	23 / 17
5. 10	Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic

E - Motor

6. 1	Drive motor rating S2 60 min (48V)	kW	7.0x2	7.0x2	7.0x2	7.0x2	7.0x2
6. 2	Pump motor rating at S3 - 15 % (48V)	kW	17	17	17	17	17
6. 4	Battery voltage, nominal capacity K5 (48V)	Ah	660	715	740	740	740
6. 5	Battery weight	lb	2,403	2,535	2,910	2,910	2,910
	Battery compartment dimensions L / W / H	in	41 / 32 / 21	41 / 32 / 21	41 / 39 / 21	41 / 39 / 21	41 / 39 / 21

Other Details

8. 1	Type of drive control		AC	AC	AC	AC	AC
------	-----------------------	--	----	----	----	----	----



6100 Atlantic Blvd Norcross, GA 30071
 TEL (678) 823 7777 FAX (678) 823 7778



PLEASE CONTACT

www.hceamericas.com

2013. 10 Rev. 0