

16/18/20B-9

Electric Counterbalance Trucks

MOVING YOU FURTHER

HYUNDAI HEAVY INDUSTRIES



 **HYUNDAI**
CONSTRUCTION EQUIPMENT AMERICAS, INC.

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

Load Indicator

Battery side loading system

Curve control system

Fingertip controlled mini levers available (optional)

Safety system that prevents over loading (optional)



High Efficiency & Optimal Performance



More efficient operating control levers (Optional)

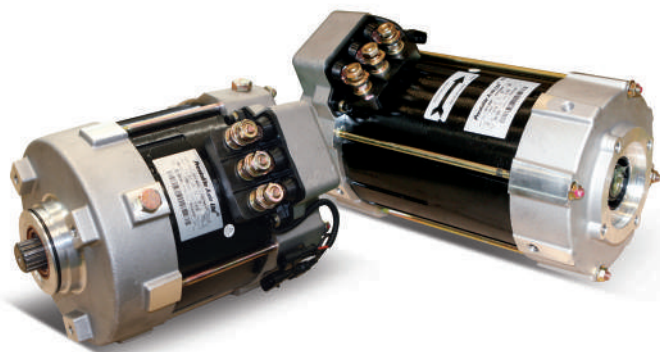
Electronic directional control and secondary horn are mounted to the hydraulic lift lever for quick and precise maneuvering.



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 reduction maintenance cost.

Efficient, smooth running and compact design provide you with enhanced performance and highest productivity.

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Some of the photos may include optional equipment.

Curve control

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



Driving Speed



Limit the speed

Designed for compact aisle width and turning radius

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



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.



Gradeability (MAX)

Model	%
16B-9	29.5
18B-9	27.5
20B-9	24.5

Travel Speed (MAX), unloaded

Model	mph
16B-9	10.6
18B-9	10.6
20B-9	10.6

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 operators with a wider span of visibility.

Some of the photos may include optional equipment.



Panoramic mirror

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

Strong overhead guard

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

Hyundai forklifts are equipped with many safety features as standard, providing operators with a safe and comfortable working environment.

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Some of the photos may include optional equipment.

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 inoperable.

Lift Lock

Tilt Lock

Drive Lock



Safety lamps & rear reflectors

Halogen headlights and rear LED combination lights offer the driver visibility in all circumstances. Rear reflectors mounted on the counterweight enhance safety for the driver and the application.

Optimised Ergonomics & Fast and Easy Maintenance



Spacious operator compartment

Some of the photos may include optional equipment.

The newly designed operator compartment has ample space, providing a wider field of view and great operator comfort.



Optimized pedal position and floor mat

The position of accelerator and throttle have been optimized for operator comfort.



Low entrance height

The low entrance height makes getting in and out of the operator compartment easy and safe. The height of the entrance step is only 16 inches high.



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

With an orange seat belt (now standard), this is an easily adjustable suspension seat has two lumbar settings and adjustable armrests, and provides great comfort, reducing operator fatigue.

An ideal arrangement of components provides highly visible operational indicators, and convenient access to maintenance settings and diagnostics.

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Advanced LCD Monitor

Some of the photos may include optional equipment.

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 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 multi-languages (maximum 11) for operators.

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



Easy battery replacement

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 is easily visible through the monitor.

New 9 Series

Mast Specification (16/18B-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								
		16/18B-9	16B-9	18B-9	16B-9	18B-9	16B-9	18B-9		16/18B-9	16B-9	18B-9	16B-9	18B-9	16B-9
2-Stage Limited free lift	V250	99.4	67.7	67.7	1.4	1.4	1.4	1.4	5/7	3,200	3,500	3,100	3,500	6,790	7,116
	V270	107.3	71.7	71.7	1.4	1.4	1.4	1.4	5/7	3,200	3,500	3,100	3,500	6,817	7,143
	V300	119.1	77.6	77.6	1.4	1.4	1.4	1.4	5/7	3,200	3,500	3,100	3,500	6,861	7,187
	* V330	130.9	83.5	83.5	1.4	1.4	1.4	1.4	5/7	3,200	3,500	3,100	3,500	6,905	7,231
	V1.40	138.8	87.4	87.4	1.4	1.4	1.4	1.4	5/7	3,200	3,500	3,100	3,500	6,933	7,260
	V370	146.7	91.3	91.3	1.4	1.4	1.4	1.4	5/7	3,200	3,500	3,100	3,500	6,962	7,288
	V400	158.5	97.2	97.2	1.4	1.4	1.4	1.4	5/7	3,150	3,500	3,040	3,500	7,017	7,341
	V450	178.1	111.0	111.0	1.4	1.4	1.4	1.4	5/5	3,040	3,500	2,950	3,430	7,165	7,491
	V500	197.8	120.9	120.9	1.4	1.4	1.4	1.4	5/5	2,810	3,370	2,750	3,260	7,240	7,564
V550	217.5	130.7	130.7	1.4	1.4	1.4	1.4	5/5	2,750	3,280	2,660	3,170	7,284	7,608	
2-Stage full free lift	VF300	119.1	77.6	77.6	38.3	38.3	57.5	57.5	5/5	3,200	3,500	3,100	3,500	6,947	7,271
	VF330	130.9	83.5	83.5	44.2	44.2	63.4	63.4	5/5	3,200	3,500	3,100	3,500	6,993	7,319
	VF350	138.8	87.4	87.4	48.1	48.1	67.3	67.3	5/5	3,200	3,500	3,100	3,500	7,026	7,352
3-Stage full free lift	TF/TS370	147.0	69.7	69.7	30.4	30.0	49.8	49.8	5/5	3,150	3,500	3,040	3,500	7,116	7,440
	TF/TS400	158.9	73.6	73.6	34.3	34.0	53.7	53.7	5/5	3,060	3,500	2,950	3,430	7,160	7,485
	TF/TS430	170.7	77.6	77.6	38.3	37.9	57.6	57.6	5/5	2,990	3,500	2,880	3,390	7,202	7,529
	TF/TS450	178.5	81.5	81.5	42.2	41.9	61.6	61.6	5/5	2,950	3,460	2,840	3,350	7,246	7,571
	TF/TS470	186.4	83.5	83.5	44.2	43.8	63.5	63.5	5/5	2,910	3,370	2,800	3,240	7,269	7,595
	TF/TS500	198.2	87.4	87.4	48.1	47.9	67.5	67.5	5/5	2,860	3,260	2,750	3,150	7,313	7,639
	TF/TS550	217.9	95.3	95.3	56.0	55.7	75.4	75.4	5/5	2,750	3,080	2,600	2,970	7,401	7,725
	TF/TS600	237.6	103.1	103.1	63.9	63.5	83.2	83.2	5/5	2,550	2,770	2,460	2,690	7,540	7,866
	TF/TS650	257.3	111.0	111.0	71.7	71.4	91.1	91.1	5/5	2,160	2,690	2,070	2,580	7,639	7,965
TF/TS700	277.0	118.9	118.9	79.6	79.3	99.0	99.0	5/5	1,870	2,180	1,780	2,090	7,725	8,049	

Mast Specification (20B-9)

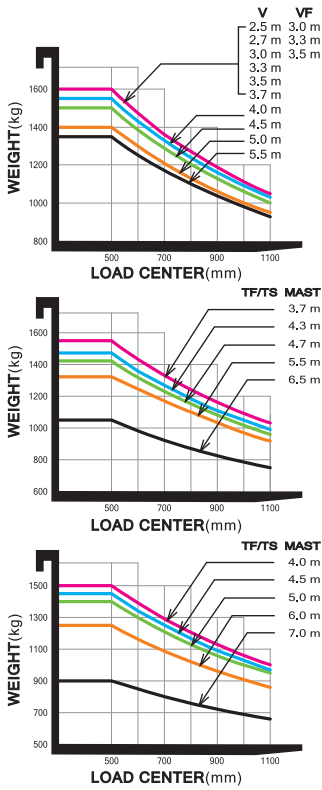
Mast Type	Maximum Fork Height (in)	Overall Height (Lowered) (in)			Free Lift Height (in)		Tilt Angle (deg) Fwd / Bwd	Load Capacity without side shift at (24in LC)(lb)		Load Capacity with side shift at (24in LC)(lb)		Truck Weight (Unloaded) (lb)	
					With Load Backrest	Without Load Backrest							
		20B-9	20B-9	20B-9	20B-9	20B-9		20B-9	20B-9	20B-9	20B-9		
2-Stage Limited free lift	V250	99.6	68.1		1.6	1.6	5/7	4,000	3,900	7,557			
	V270	107.5	72.0		1.6	1.6	5/7	4,000	3,900	7,584			
	V300	119.3	77.9		1.6	1.6	5/7	4,000	3,900	7,628			
	* V330	131.1	83.8		1.6	1.6	5/7	4,000	3,900	7,672			
	V1.40	139.0	87.8		1.6	1.6	5/7	4,000	3,900	7,701			
	V370	146.9	91.7		1.6	1.6	5/7	4,000	3,900	7,729			
	V400	158.7	97.6		1.6	1.6	5/7	4,000	3,900	7,785			
	V450	178.3	111.4		1.6	1.6	5/5	3,920	3,790	7,932			
	V500	198.0	121.2		1.6	1.6	5/5	3,790	3,660	8,007			
V550	217.7	131.1		1.6	1.6	5/5	3,630	3,520	8,051				
2-Stage full free lift	VF300	119.3	77.9		38.8	60.9	5/5	4,000	3,900	7,714			
	VF330	131.1	83.8		44.7	66.9	5/5	4,000	3,900	7,760			
	VF350	139.0	87.8		48.7	70.8	5/5	4,000	3,900	7,793			
3-Stage full free lift	TF/TS370	147.2	70.0		30.9	50.2	5/5	4,000	3,900	7,884			
	TF/TS400	159.1	74.0		34.9	54.1	5/5	3,960	3,830	7,928			
	TF/TS430	170.9	77.9		38.8	58.0	5/5	3,920	3,770	7,970			
	TF/TS450	178.7	81.9		42.8	62.0	5/5	3,880	3,720	8,014			
	TF/TS470	186.6	83.8		44.7	63.9	5/5	3,770	3,660	8,036			
	TF/TS500	198.4	87.8		48.7	67.9	5/5	3,700	3,570	8,080			
	TF/TS550	218.1	95.6		56.5	75.7	5/5	3,480	3,370	8,168			
	TF/TS600	237.8	103.5		64.4	83.6	5/5	3,350	3,170	8,307			
	TF/TS650	257.5	111.4		72.3	91.5	5/5	2,690	2,600	8,406			
TF/TS700	277.2	119.3		80.2	99.4	5/5	2,400	2,310	8,492				

* Standard

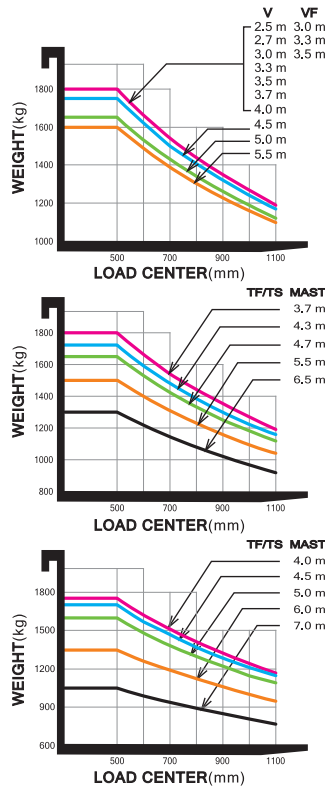
※TS-Mast : Wide Visible 3-Stage Full Free Lift Mast with 2 Free Lift Cylinders.

Load Capacity

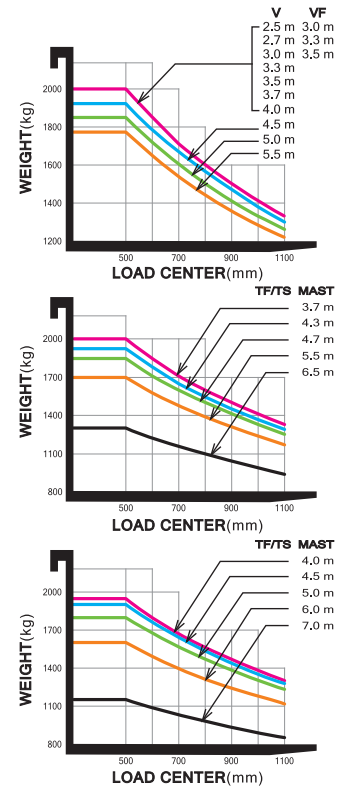
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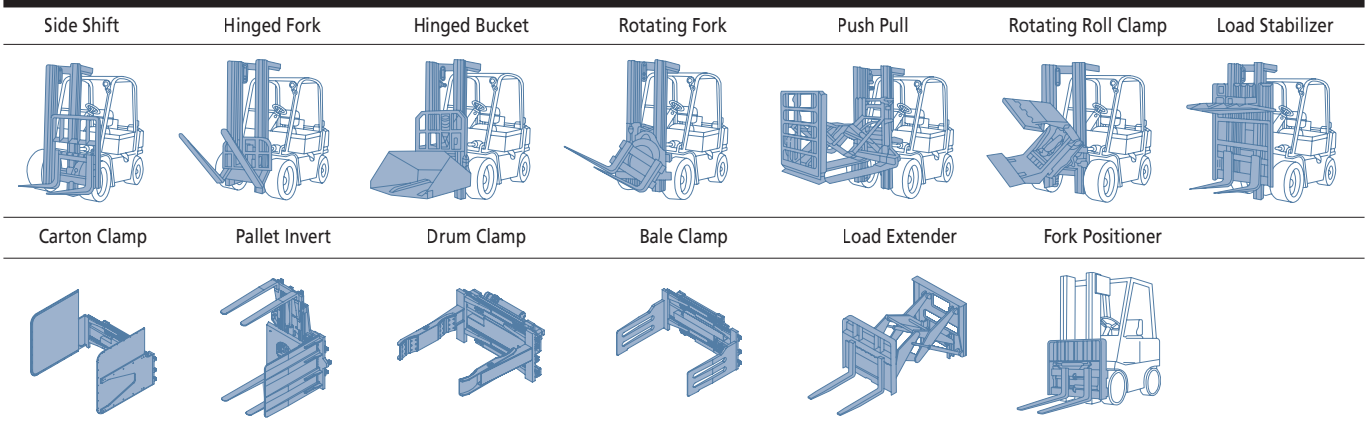
18B-9



20B-9



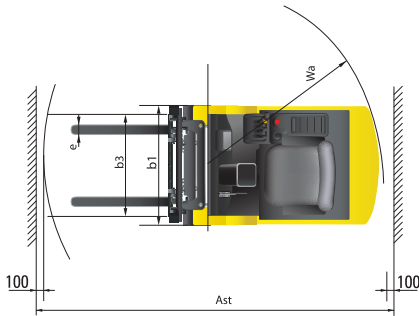
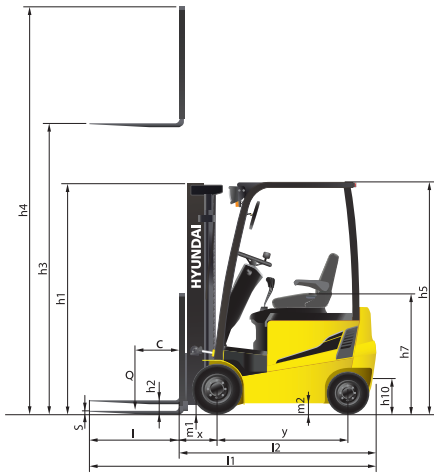
Various Attachments



Optional Items

- **Fork (in)**
16 / 18B-9 : 1.4 x 3.9 x 29.5, 33.5, 35.4 (STD), 41.3, 47.2, 53.1, 59.1
20B-9 : 1.6 x 3.9 x 35.4 (STD), 37.4, 39.4, 41.3, 45.3, 47.2, 53.1, 59.1, 63.0
- **Overshoe (in)** : 51.2 / 59.1 / 66.9
- **Integral Sideshift**
- **Tire** : SOLID (STD) / Non-marking /
Wide tire [16B-9 : Front tire (200 / 50-10)]
- **Seat** : Grammer
- **M.C.V** : 2-Spool (STD), 3-Spool, 4-Spool
- **Auto Fork Leveling**
- **Beacon Lamp**
- **Load Indicator**
- **Work Lamp**
- **OPSS** : Mast
- **UL** : ES, EE
- **Cabin**
- **Direction Switch on Lever**
- **Cold Storage** (for -30°C cold working environments)

Dimension



Specification

Identification

		HYUNDAI			
1.1	Manufacturer	HYUNDAI			
1.2	Manufacturer's type designation	16B-9	18B-9	20B-9	
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 lb	3,200	3,500	4,000
1.6	Load center distance	c in	24	24	24
1.8	Load distance, center of front axle to fork	x in	14.2	14.2	14.4
1.9	Wheelbase	y in	53.3	56.7	56.7

Weights

2.1	Service weight(including battery)	lb	6,945	7,220	7,672
2.2	Axle loading, loaded front / rear	lb	9,259 / 1,213	9,872 / 1,316	10,692 / 1,389
2.3	Axle loading , unloaded front / rear	lb	3,494 / 3,450	3,534 / 3,686	3,638 / 4 034

Wheels, Chassis

3.1	Tires : solid rubber(V), superelastic(SE), pneumatic(P), polyurethane(PE)		SE	SE	SE
3.2	Tires size, front(Φ x width)		18x7-8	200 / 50-10	200 / 50-10
3.3	Tires size, rear(Φx width)		16x6-8	16x6-8	16x6-8
3.5	Wheels, number front rear(x = driven wheels)		2x / 2	2x / 2	2x / 2
3.6	Track width, front	in	1.4.2	1.4.6	1.4.6
3.7	Track width, rear	in	34.6	34.6	34.6

Basic Dimensions

4.1	Mast / fork carriage tilt forward / backward	degrees	5 / 7	5 / 7	5 / 7
4.2	Lowered mast height	h1 in	83.5	83.8	83.8
4.3	Free lift height	h2 in	1.4	1.4	1.6
4.4	Lift height	h3 in	130.9	130.9	131.1
4.5	Extended mast height	h4 in	170.1	170.1	170.1
4.7	Overhead guard (cab) height	h5 in	81.3	81.3	81.3
4.8	Seat height / Standing height	h7 in	38.7	38.7	38.7
4.12	Coupling height	h10 in	9.8	9.8	9.8
4.19	Overall length	l1 in	115.6	118.9	119.3
4.20	Length to face of forks	l2 in	80.1	83.5	83.9
4.21	Overall width	b1 in	42.3	43.5	43.5
4.22	Fork dimensions	l / e / sin	1.4.4 x 3.9 x 1.4	1.4.4 x 3.9 x 1.4	1.4.4 x 3.9 x 1.4
4.23	Fork carriage ISO 2328, class / type A, B		II / A	II / A	II / A
4.24	Fork - carriage width	b3 in	39.6	39.6	39.6
4.31	Ground clearance, loaded, under mast	m1 in	3.3	3.7	3.7
4.32	Ground clearance, centre of wheelbase	m2 in	3.5	3.5	3.9
4.33	Aisle width for pallets 1,000 x 1,200 crossways	Ast in	132.0	134.9	114.7
4.34	Aisle width for pallets 800 x 1,200 lengthways	Ast in	137.6	140.7	141.5
4.1.4	Turning radius	Wa in	67.3	70.7	71.3
4.36	Smallest pivot point distance	in	-	-	-

Performance Data

5.1	Travel speed, loaded / unloaded	mph	9.9 / 10.6	9.9 / 10.6	9.9 / 10.6
5.2	Lift speed, loaded / unloaded	ft/min	84 / 120	84 / 120	84 / 120
5.3	Lowering speed, loaded / unloaded	ft/smin	96 / 90	96 / 90	96 / 90
5.6	Max. drawbar pull, loaded / unloaded S2 5min	N	15,102 / 14,759	15,190 / 14,710	14,367 / 14,043
5.8	Max. gradient performance, loaded / unloaded S2 5min	%	29.5	27.5	24.5
5.10	Service brake		Hydraulic	Hydraulic	Hydraulic

E - Motor

6.1	Drive motor rating S2 60 min	kW	4.7x2	4.7x2	4.7x2
6.2	Pump motor rating at 53 - 15 %	kW	14.0	14.0	14.0
6.4	Battery voltage, nominal capacity K5	V/Ah	48 / 510	48 / 585	48 / 585
6.5	Battery weight	lb	1,874	2,271	2,271
	Battery dimensions L / W / H	in	38.5 / 21.5 / 25.0	38.5 / 24.8 / 25.0	38.5 / 24.8 / 25.0

Other Details

8.1	Type of drive control		AC	AC	AC
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PLEASE CONTACT