

# 10/13/15BTR-9

Electric Counterbalance Trucks

MOVING YOU FURTHER

HYUNDAI HEAVY INDUSTRIES



# Your satisfaction is **our priority!**

Hyundai introduces a new line of 9-series battery forklift trucks.  
The newly designed 3 wheel counterbalance trucks with rear wheel drive provide every operator comfortable driving, increased productivity and easy maintenance.



reddot design award  
honourable mention 2012

## **Compact forklift with proven AC technology**

**Maximum performance**

**Spacious operator's cab**

**Fingertip controlled mini levers available (optional)**

**Weight indicator (optional)**

**Safety system that prevents over loading (optional)**

**Battery side loading system available**

**Wet brakes standard**



■ Some of the photos may include optional equipment.

# High Efficiency & Optimal Performance



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

**10/13/15BTR-9**

## More efficient operating control levers

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



■ Some of the photos may include optional equipment.



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

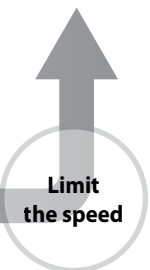
The enclosed drive and pump motor with AC technology combine power, high maintenance intervals and excellent durability. The ZF transmission converts the drive engine's power to any direction the driver requires.



■ 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.



## Designed for compact aisle width and turning radius

The combination of 3-wheel design and rear wheel drive offers central pivot turning.

This allows the driver to work in very confined spaces.



### Travel Speed (MAX)

Model	Km / h
10BTR-9	13
13BTR-9	13
15BTR-9	13

### Gradeability (MAX)

Model	%
10BTR-9	18
13BTR-9	15
15BTR-9	13

## 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

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

**10/13/15BTR-9**



■ 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.



## 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.

■ Some of the photos may include optional equipment.



## Strong overhead guard

Exceeding CEE and ANSI regulations, the overhead guard offers great protection combined with excellent all round visibility



## 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



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

**10/13/15BTR-9**



■ Some of the photos may include optional equipment.

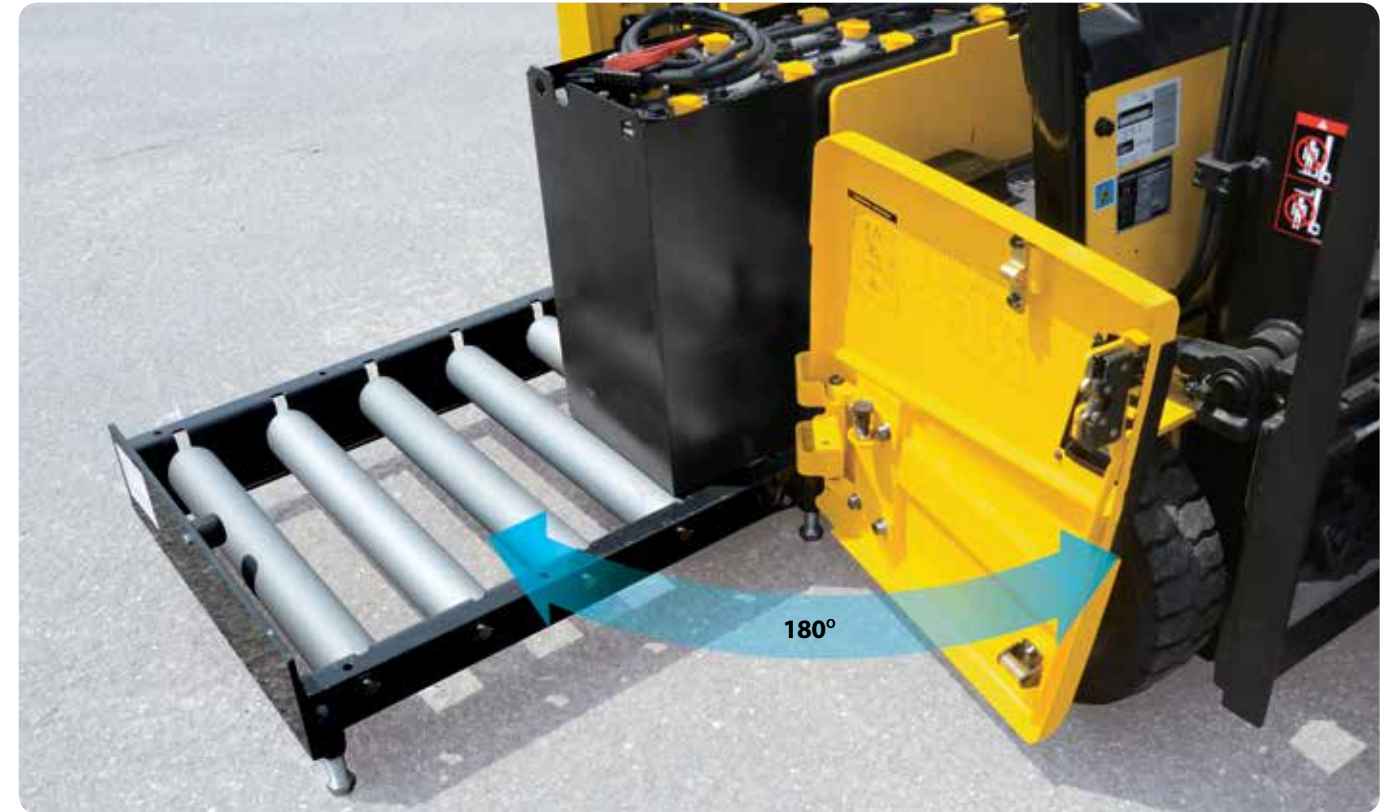
### Grammer seat (Option)

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



### Spacious operator cabin

The BTR is designed as a small, compact design, yet the operator compartment has ample room for virtually any operator.



■ 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.



### Low entrance height

In order to get in and out of the cabine in an easy and safe way the height of the entrance step is only 400mm 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.



### Optimized pedal position and floor mat

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



### Advanced LCD Monitor

The LCD monitor with 3.2 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 optional load indicator displays the load weight in the monitor. The operator can select various performance modes to meet all working conditions.

**H** (High) mode

**N** (Normal) mode

**E** (Economic) mode

**Turtle mode** (maintain 7 km/h travel speed when lifting)



### 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

## 10/13/15BTR-9

### Mast Specification (10/13BTR-9)

Mast Type	Maximum Fork Height (mm)	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		10BTR-9	13BTR-9	10BTR-9	13BTR-9	10BTR-9	13BTR-9	
			10/13BTR-9	10/13BTR-9		10/13BTR-9	10/13BTR-9	10/13BTR-9	10/13BTR-9	10/13BTR-9	10/13BTR-9	
2-Stage Limited free lift	* V300	3,025	1,970	35	35	5 / 6	1,000	1,250	900	1,150	2,413	2,632
	V330	3,325	2,120	35	35	5 / 6	1,000	1,250	900	1,150	2,432	2,651
	V350	3,525	2,220	35	35	5 / 6	1,000	1,250	900	1,150	2,445	2,664
	V370	3,725	2,320	35	35	5 / 6	1,000	1,250	900	1,150	2,458	2,677
	V400	4,025	2,470	35	35	5 / 6	1,000	1,250	900	1,150	2,481	2,700
	V500	5,025	3,070	35	35	5 / 6	975	1,200	875	1,100	2,588	2,807
2-Stage full free lift	VF300	3,025	1,970	972	1,460	5 / 5	1,000	1,250	900	1,150	2,437	2,656
	VF330	3,325	2,120	1,122	1,610	5 / 5	1,000	1,250	900	1,150	2,458	2,677
	VF350	3,525	2,220	1,222	1,710	5 / 5	1,000	1,250	900	1,150	2,473	2,692
3-Stage full free lift	TF400/TS400	4,035	1,870	863	1,364	5 / 5	1,000	1,250	900	1,150	2,532	2,751
	TF430/TS430	4,335	1,970	963	1,464	5 / 5	1,000	1,225	900	1,125	2,551	2,770
	TF450/TS450	4,535	2,070	1,063	1,564	5 / 5	975	1,200	900	1,100	2,570	2,789
	TF470/TS470	4,735	2,120	1,113	1,614	5 / 5	950	1,175	875	1,075	2,580	2,799
	TF500/TS500	5,035	2,220	1,216	1,714	5 / 5	925	1,150	850	1,050	2,599	2,818
	TF550/TS550	5,535	2,420	1,416	1,914	5 / 5	900	1,100	825	1,025	2,637	2,856
TF600/TS600	6,035	2,620	1,613	2,114	5 / 5	850	1,050	775	975	2,693	2,912	

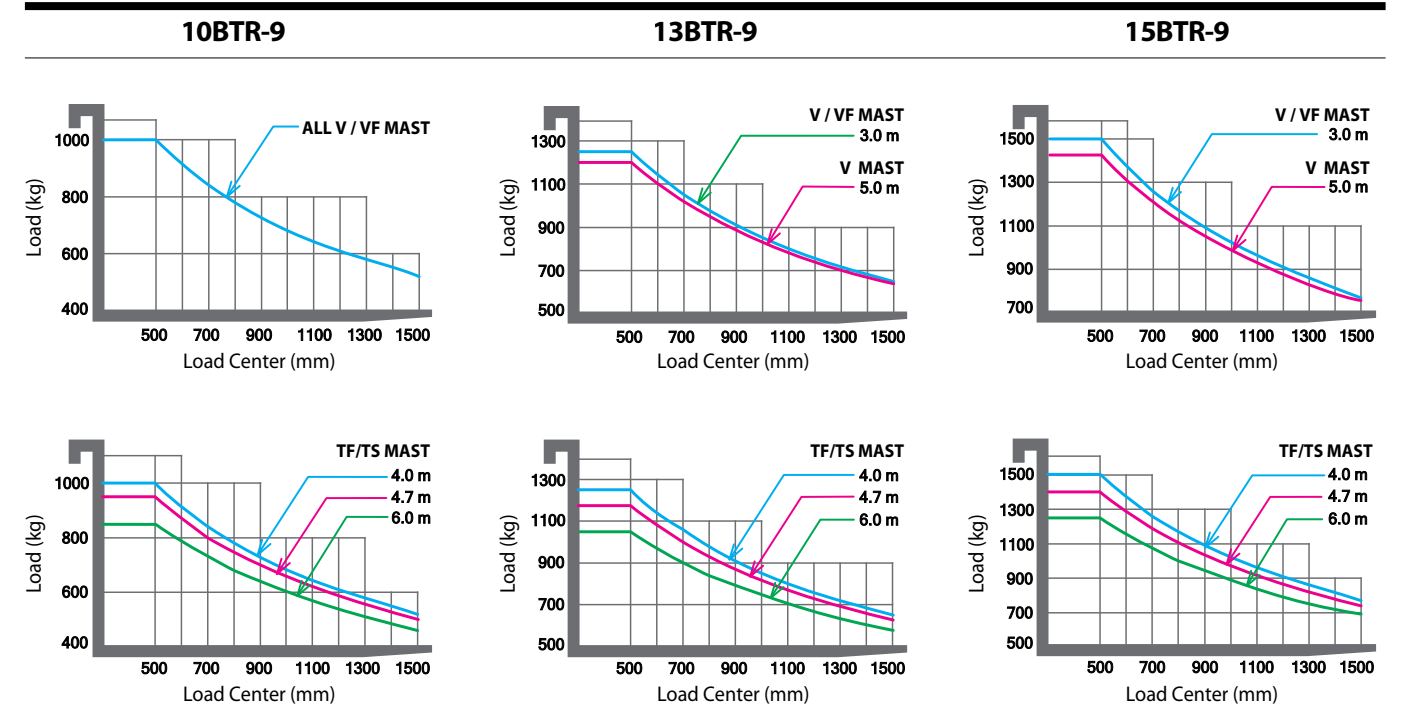
### Mast Specification (15BTR-9)

Mast Type	Maximum Fork Height (mm)	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		15BTR-9	15BTR-9	15BTR-9	15BTR-9	15BTR-9	15BTR-9
			15BTR-9	15BTR-9		15BTR-9	15BTR-9	15BTR-9	15BTR-9	15BTR-9	15BTR-9
2-Stage Limited free lift	* V300	3,025	1,970	35	35	5 / 6	1,500	1,375	1,375	1,375	2,841
	V330	3,325	2,120	35	35	5 / 6	1,500	1,375	1,375	1,375	2,860
	V350	3,525	2,220	35	35	5 / 6	1,500	1,375	1,375	1,375	2,873
	V370	3,725	2,320	35	35	5 / 6	1,500	1,375	1,375	1,375	2,886
	V400	4,025	2,470	35	35	5 / 6	1,500	1,375	1,375	1,375	2,909
	V500	5,025	3,070	35	35	5 / 6	1,425	1,300	1,300	1,300	3,016
2-Stage full free lift	VF300	3,025	1,970	972	1,460	5 / 5	1,500	1,375	1,375	1,375	2,865
	VF330	3,325	2,120	1,122	1,610	5 / 5	1,500	1,375	1,375	1,375	2,886
	VF350	3,525	2,220	1,222	1,710	5 / 5	1,500	1,375	1,375	1,375	2,901
3-Stage full free lift	TF400/TS400	4,035	1,870	863	1,364	5 / 5	1,500	1,375	1,375	1,375	2,960
	TF430/TS430	4,335	1,970	963	1,464	5 / 5	1,450	1,325	1,325	1,325	2,979
	TF450/TS450	4,535	2,070	1,063	1,564	5 / 5	1,425	1,300	1,300	1,300	2,998
	TF470/TS470	4,735	2,120	1,113	1,614	5 / 5	1,400	1,275	1,275	1,275	3,008
	TF500/TS500	5,035	2,220	1,216	1,714	5 / 5	1,375	1,250	1,250	1,250	3,027
	TF550/TS550	5,535	2,420	1,416	1,914	5 / 5	1,325	1,200	1,200	1,200	3,065
TF600/TS600	6,035	2,620	1,613	2,114	5 / 5	1,250	1,150	1,150	1,150	3,121	

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

\* Standard

### Load Capacity

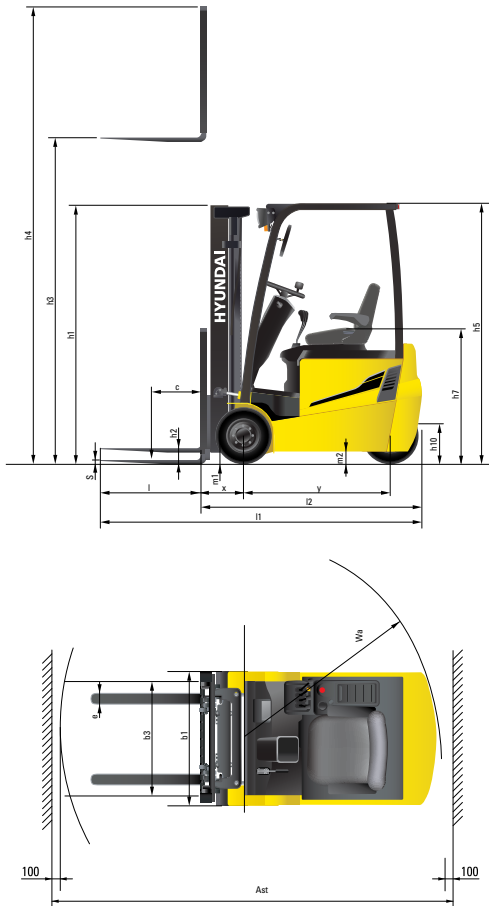


### Optional Items

- **Mast**  
V330, V350, V370, V400, V500, VF300, VF330, VF350  
TF/TS400, TF/TS430, TF/TS450, TF/TS470, TF/TS500, TF/TS550, TF/TS600
- **Fork (mm)**  
800 / 900 / 1050 / 1200 / 1350 / 1500
- **Overshoe (mm)**  
1300 / 1500 / 1700
- **Sideshift**

- **Integral Sideshift**
- **Tilting** : 5° / 6°, 5° / 5°
- **Tire** : Non-marking
- **Finger Tip Control**
- **Beacon Lamp**
- **Load Indicator**
- **Work Lamp**

## Dimension



## Specification

### Identification

		Hyundai			
1.1	Manufacturer	Hyundai			
1.2	Type	10BTR-9	13BTR-9	15BTR-9	
1.3	Drive: Electric, Diesel, LPG Gas	Electric	Electric	Electric	
1.4	Type of operation: hand, pedestrian, standing, seated, order-picker	Seated	Seated	Seated	
1.5	Load capacity (standard)	Q (kg)	1,000	1,250	1,500
1.6	Load center distance	c (mm)	500	500	500
1.8	Load distance, center of drive axle to forks	x (mm)	330	330	330
1.9	Wheelbase	y (mm)	1,065	1,165	1,220

### Weights

2.1	Service weight	kg	2,405	2,630	2,840
2.2	Axle loading, loaded front / rear	kg	2,895 / 510	3,340 / 540	3,775 / 565
2.3	Axle loading, unloaded front / rear	kg	1,116 / 1,289	1,200 / 1,430	1,254 / 1,586

### Wheels, chassis

3.1	Tires : solid rubber (V), superelastic (SE), pneumatic (P), polyurethane (PE)		SE	SE	SE
3.2	Tires size, front (Ø x width)		18 x 7-8	18 x 7-8	18 x 7-8
3.3	Tires size, rear (Ø x width)		18 x 7-8	18 x 7-8	18 x 7-8
3.5	Wheels, number front rear (x = driven wheels)		2 / 1x	2 / 1x	2 / 1x
3.6	Track width, front	b10 (mm)	835	835	835
3.7	Track width, rear	b11 (mm)	-	-	-

### Basic dimensions

4.1	Mast / fork carriage tilt forward / backward	degrees	5 / 6	5 / 6	5 / 6
4.2	Lowered mast height (standard)	h1 (mm)	1,970	1,970	1,970
4.3	Free lift	h2 (mm)	35	35	35
4.4	Lift height (standard)	h3 (mm)	3,025	3,025	3,025
4.5	Extended mast height (standard)	h4 (mm)	4,024	4,024	4,024
4.7	Overhead load guard (cab) height	h5 (mm)	2,020	2,020	2,020
4.8	Seat height / standing height	h7 (mm)	927	927	927
4.12	Coupling height	h10 (mm)	325	325	325
4.19	Overall length	l1 (mm)	2,565	2,655	2,710
4.20	Length to face of forks	l2 (mm)	1,655	1,750	1,810
4.21	Overall width	b1 (mm)	990	990	990
4.22	Fork dimensions (hook type) LxWxT	s / e / l (mm)	35 x 80 x 800	35 x 80 x 800	35 x 80 x 800
4.23	Fork carriage ISO 2328, class / type A/B		II	II	II
4.24	Fork carriage width	b3 (mm)	950	950	950
4.31	Ground clearance, loaded, under mast	m1 (mm)	85	85	85
4.32	Ground clearance, centre of wheelbase	m2 (mm)	90	90	90
4.33	Aisle width for pallets 1000 x 1200 crossways (L x W)	Ast (mm)	2,994	3,084	3,139
4.34	Aisle width for pallets 800 x 1200 lengthways (W x L)	Ast (mm)	3,116	3,206	3,261
4.35	Turning radius	Wa (mm)	1,335	1,425	1,480
4.36	Smallest pivot point distance	(mm)	-	-	-

### Performance data

5.1	Travel speed, unloaded	km/h	12.5 / 13	12.5 / 13	12.5 / 13
5.2	Lift speed, loaded / unloaded	mm/s	310 / 530	300 / 530	290 / 530
5.3	Lowering speed, loaded / unloaded	mm/s	500 / 450	500 / 450	500 / 450
5.6	Drawbar pull, loaded	N	642 / 690	631 / 685	620 / 683
5.8	Gradient performance, loaded / unloaded	%	18 / 25	15 / 24	13 / 23
5.9	Acceleration time, loaded/unloaded (10m)	S	-	-	-
5.10	Service brake		Hydraulic	Hydraulic	Hydraulic

### E - Motor

6.1	Drive motor rating S2 60 min (24V)	kW	4.3	4.3	4.3
6.2	Pump motor rating at S3 - 15 % (24V)	kW	9.0	9.0	9.0
6.4	Battery voltage, nominal capacity K5 (24V)	V/Ah	24 / 625	24 / 750	24 / 750
6.5	Battery weight	kg	450	600	690
	Battery compartment dimensions L / W / H	mm	830 / 328 / 627	830 / 436 / 627	830 / 490 / 627

### Other details

8.1	Type of drive control		AC	AC	AC
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\* Standard and optional equipment may vary. Contact your Hyundai dealer for more information. The machine may vary according to international standards.

\* The photos may include attachments and optional equipment that are not available in your area.

\* Materials and specifications are subject to change without advance notice.

\* All imperial measurements rounded off to the nearest pound or inch.

PLEASE CONTACT

**HYUNDAI**  
HEAVY INDUSTRIES EUROPE  
MATERIAL HANDLING