



MOVING YOU FURTHER

110-130
160D-9



Some of the photos may include optional equipment.

 **HYUNDAI**
MATERIAL HANDLING

Your satisfaction is our priority.

Proven technology! Hyundai 9 Series diesel forklift

The Hyundai 9 Series big diesel truck is ready for the customers.

Overwhelming the worksite with its superior performance and providing optimal fuel efficiency, the Hyundai 9 Series big diesel truck offers outstanding durability based on its application of high-quality hydraulic and functional components suitable for large and heavy load duties, as well as comfortable and pleasant driving space, and convenient after-sales management.

Performance

- Tier 4, 165.8ps Cummins QSB6.7 engine
- Fully automatic ZF electronic transmission with 3 forward-reverse shifts
- Wet disc brake and large DIC axle of planetary gear final reduction

Ensured safety at the logistics site

- Auto parking brake
- Real-time notification of rear wheel steering angle
- Operator presence sensing system (OPSS)

Comfortable and safe driving

- Deluxe cabin equipped with fully automatic air conditioning
- Hydraulic pilot valve lever
- Load weight indicator(OPT)

Convenient management

- One-touch electric motor-driven tilting cabin
- Notification of replacement of the consumable items
- Engine fault diagnosis





Power & Performance

High Efficiency, Optimal Performance

Robust, refined, and luxurious design – 110/130/160D-9!
Offering increased power and fuel economy, this model will be your best partner in any work environment.



Some of the photos may include optional equipment.

Powerful and economical Cummins QSB6.7 engine

The six-cylinder VGT (variable-geometry turbocharger) QSB6.7 engine, equipped with the German Bosch's fuel system proven for its reliability and durability, shows lower vibration compared to other engines, delivers excellent cold-start performance, and does not emit white smoke in the winter. Moreover, its combination with the ZF transmission, optimized in fuel injection control and improved in driving efficiency, further enhances fuel efficiency and performance. In particular, you can experience increased power during operations due to its high torque at low and medium speeds, and DOC and SCR emission aftertreatment systems have been applied to satisfy Tier 4 (requires urea solution).

165.8ps/2,300rpm
74.7kgf.m/1,500rpm



German electric ZF transmission

Balance between optimized engine and transmission performances increases low-speed acceleration, enables automatic transmission by detecting the number of revolutions in the transmission output shaft. Depending on the driver's need, the transmission can also be operated manually. You can check the status and fault details of the transmission on the cluster display.



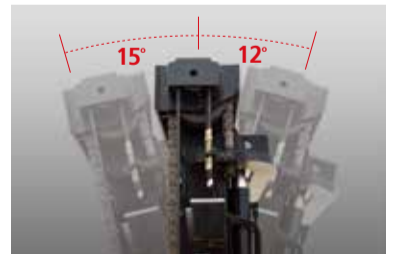
High capacity drive axle

The planetary gear type, high capacity drive axle are suitable for silent running and high load operations. Also It enables outstanding power transmission and shows exceptional adaptability to sudden changes in torque due to its high durability. Furthermore, its wet-type, multi-plate service brake delivers consistent braking power even when operations are repeated.



Load-sensing hydraulic system & Fully hydraulic steering system

Composed of a swash plate piston pump that supplies the required flow for a workload and a Husco load-sensing hydraulic valve, the hydraulic system optimizes energy consumption and increases engine and transmission durability.



Increased mast tilting angle

Tilting speed is improved by combining some hydraulic pressure generated from the secondary pump to the primary pump flow rate. The tilting angle of 15 degrees forward and 12 degrees backward increases work efficiency.

Engine mode control

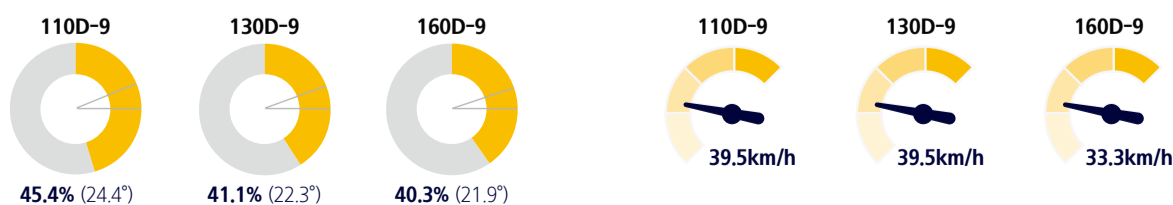
Engine performance can be adjusted to suit the workload, simply by operating a switch mounted on the side panel.
STD mode : Light load operations (fuel saving mode)
PWR mode : Operations on slope requiring intense power

Low engine RPM conversion

Depending on the need, the driver can convert the engine to a low RPM. The RPM will return to its initial settings value once engine is stopped and restarted.

Excellent gradeability and travel speed

With the best engine power in its class, it delivers outstanding running performance and exceptional gradeability, ensuring stable operation at high speeds, on rough terrains and slopes.



Max. gradeability (loaded)

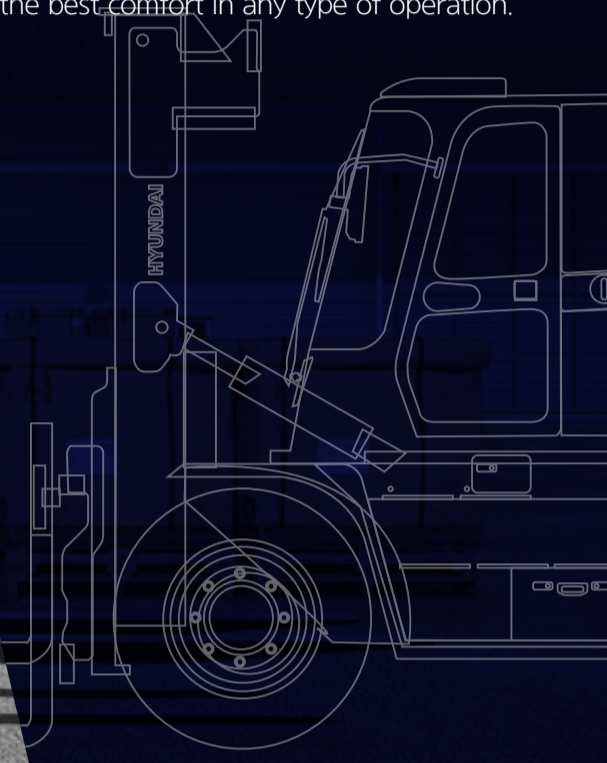
Max. Travel Speed (Unloaded)



Easy & Comfort

Comfortable Workspace Intuitive Monitoring

Ergonomically designed workspace for operator provides the best comfort in any type of operation.



Some of the photos may include optional equipment.

Ergonomic operating space

The ergonomically designed cabin was made for more space, a wider field of view and operator comfort. The smooth lever and pedal operation, adjustable tilting handle, suspension seat and deluxe cabin provide comfortable and efficient operation.



Some of the photos may include optional equipment.



Full air suspension seat (OPT)

Ergonomically designed to support a comfortable posture, the full air suspension seat relieves fatigue and enables greater comfort for operation.

New style & centralized cluster

The TFT LCD color monitor indicates real-time driving information and changing vehicle stability depending on the work condition, thus allowing easy and efficient control for the operator. Diagnostic error codes ensure easy trouble-shooting and the operator can select various performance modes.



Main Functions

- Urea level gauge
- T/M information display
- Parking brake indicator
- Battery charging failure warning
- Brake system overheat warning
- Air cleaner filter warning
- Machine inclination warning
- Load weight indicator
- Steering wheel position
- Engine coolant temperature warning
- Engine check warning lamp
- Seatbelt warning
- Exchange consumable indicator
- Mast tilt angle indicator
- High beam indicator
- T/M error warning
- OPSS indicator
- Inching indicator



Accelerator and inching pedals

Easily operable electronic accelerator pedal and inching pedal, and the hydraulic servo brake pedal enable to work long hours without fatigue.



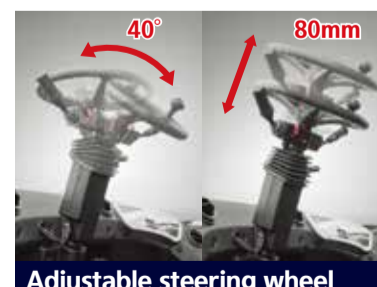
Centralized instrument switch panel

Various switches can be concentrated on the right side of the driver's seat to quickly optimize the vehicle condition to suit the working environment.



High-output air conditioner (OPT)

Full Automatic Temperature Control automatically adjusts cabin temperature to the set temperature and provides more comfortable working environment for the operator.



Adjustable steering wheel

The steering wheel can be pushed forward or backward, pushed in or out to suit the driver's body shape, providing an all the more comfortable work environment.



Highly responsive operating lever

The highly responsive operating lever, hydraulic pilot valve type, allows precise and efficient control with light and minimal operator effort. (4 levers : STD), (3/5 levers : OPT)



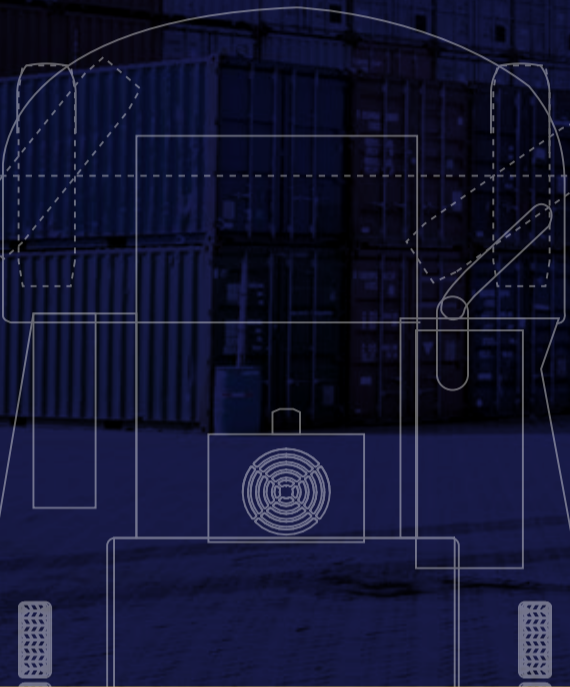
Secure & Safety

Excellent visibility Advanced safety

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



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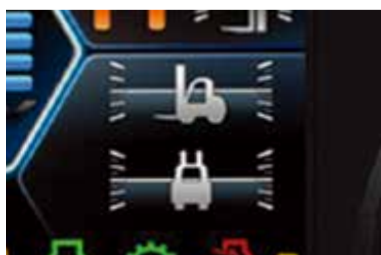


Excellent visibility for safe operation

Optimized lift cylinder arrangement provides the operator with wider visibility. A panoramic mirror expands the driver's rear view.



Some of the photos may include optional equipment.



Machine inclination warning system

The grade (left) and slope (right) sensors are built into the MCU and provide the grade and slope status information of the vehicle connected with the road surface condition in real time. Also, an alarm is emitted when the KS regulation is exceeded.



Increased night work efficiency

Four work lamps on the upper side of the mast, two headlamps on the frame fender, and two work lamps on the upper side of the counterweight enable efficient nighttime and indoor operations.



Steering wheel angle (OPT)

As a measurement of the steering angle sensor, which is installed on the kingpin of the rear axle, is displayed on the large cluster screen as an image, the operator can predict the direction of the vehicle without difficulty.

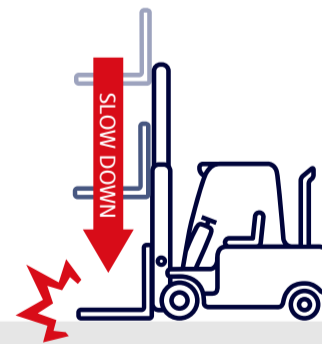
Safety features

The adoption of a high-sensitivity sensor and advanced safety system eliminates the risk of safety accidents.



Auto parking brake

If the operator leaves the seat while the gear lever is in neutral, the parking brake is automatically engaged to secure safety, and released upon the operator's return to the seat.



Fork Safety Features

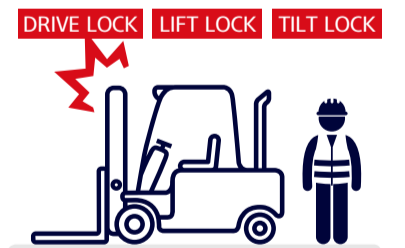
The down-safety valve prevents forks from dropping down in case of sudden damage of hydraulic line.

Speed limit setting

The operator can set and limit the maximum speed from 10km/h to 30km/h.

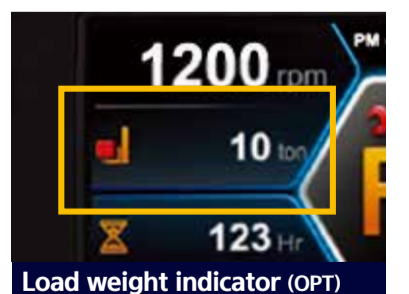
Password starting system

The operator can set a passcode to prevent vehicle theft and possible safety accidents in case the vehicle is used by an unauthorized person. (Up to 10 passwords can be set.)



Operator presence sensing system

All mast and drive movements stop functioning when the operator is not in the seat.



Load weight indicator (OPT)

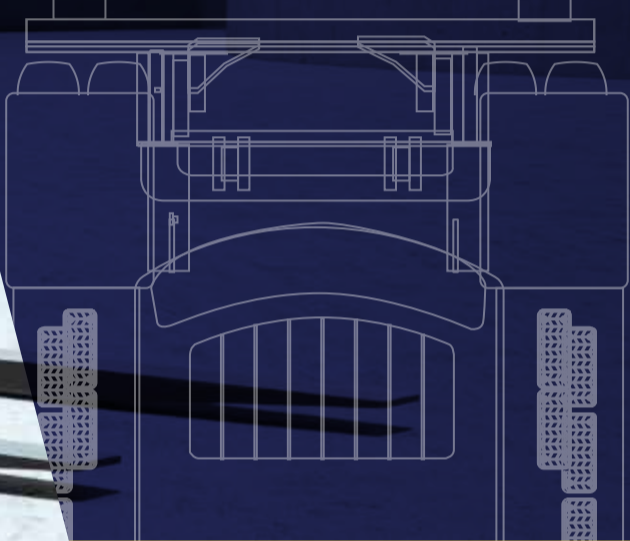
When lifting a load, a change in hydraulic pressure of the lift line is converted to a measurement of weight displayed in real time, and a warning is given at the time of overload.



Maintenance & Convenience

Fast and Easy Maintenance & Convenience Features

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



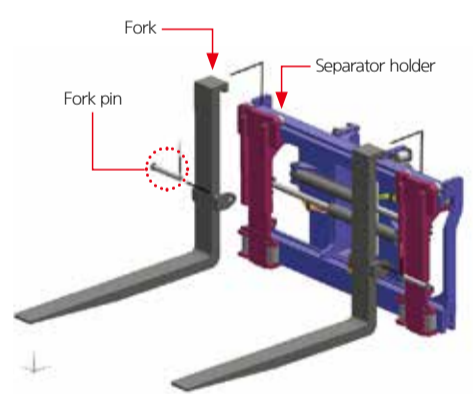
Some of the photos may include optional equipment.

Fully opening tilting cabin and hood

The tilting cabin that has been dramatically improved in its maintainability functions with a separate electric motor and hydraulic pump. By opening the cabin, which can be tilted to a maximum of 54 degrees, and the engine hood, which can be opened to the left or right, all functional components installed inside the chassis can easily be examined and serviced.



Some of the photos may include optional equipment.



Separator holder carriage (OPT)

To improve handling and easily switch forks and other attachment, separator holder system is adopted as option. It is possible to install various attachments easily.



Rear view camera (OPT)

A rear view camera and monitor are linked to the reverse gear, ensuring safer rear work environment.



Mast and carriage side roller

Side rollers show exceptional strength when working with large pipes and other long-axis products due to improved durability, are structured to facilitate lubrication since it rotates medium loads at the lower left and right sides of the mast carriage for smooth movement.



Cabin air cleaner filter

The air cleaner filter blocks external dust and noise from the cabin, and continuously supplies clean air indoor to maintain fresh air in the driving space.



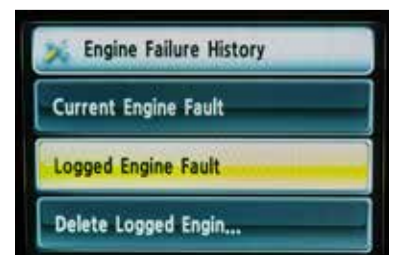
Convenient air cleaner

Air cleaner filter with large capacity enables longer filter life span. The operator can access the air filter easily by simply opening the engine hood.



Battery master switch

Damage is prevented during inspection/maintenance of electronic units, and battery discharge.



Engine fault diagnosis

Details of engine fault diagnosed by the engine control unit (ECU) can be checked on the cluster.



Maintenance management

Replacement cycle of consumable items can be checked on the monitor, thus preventing performance deterioration of major functional parts due to failure to notice deterioration.

110D-9



Mast Type	Maximum Fork Height	Overall Mast Height (Lowered)	Free Lift	Tilting Angle		Load capacity (600mm LC)		Truck Weight (Unloaded)	
				Fwd	Bwd	General	Integral side shift with Fork Positioner		
				deg	deg	kg	kg		
	mm	mm	mm	deg	deg	kg	kg	kg	
2-STAGE LIMITED FREE LIFT	※V300	3,005	3,000	0	15	12	11,000	11,000	16,275
	V330	3,305	3,150	0	15	12	11,000	11,000	16,351
	V350	3,505	3,250	0	15	12	11,000	11,000	16,400
	V400	4,005	3,550	0	15	12	11,000	11,000	16,653
	V450	4,505	3,800	0	15	12	11,000	11,000	16,778
	V500	5,005	4,100	0	15	12	11,000	11,000	16,927
	V550	5,505	4,350	0	15	12	11,000	11,000	17,158
	V600	6,005	4,650	0	15	12	11,000	11,000	17,310
	V650	6,505	4,900	0	15	12	11,000	10,760	17,443
	V700	7,005	5,150	0	15	12	10,820	10,430	17,574
2-STAGE FULL FREE LIFT	VS300	3,028	3,000	1,545	10	10	11,000	11,000	16,449
	VS350	3,528	3,250	1,795	10	10	11,000	11,000	16,589
	VS400	4,028	3,500	2,045	10	10	11,000	11,000	16,731
	VS450	4,528	3,750	2,295	10	10	11,000	11,000	16,877
	VS500	5,028	4,000	2,545	10	10	11,000	11,000	17,134
	VS550	5,528	4,250	2,795	10	10	11,000	11,000	17,352
	VS600	6,028	4,600	3,045	10	10	11,000	10,840	17,598
3-STAGE FULL FREE LIFT	TS450	4,521	2,950	1,555	10	10	11,000	11,000	17,405
	TS500	5,025	3,117	1,725	10	10	11,000	11,000	17,496
	TS550	5,525	3,284	1,891	10	10	11,000	10,950	17,588
	TS600	6,023	3,551	2,055	10	10	11,000	10,600	17,733
	TS650	6,525	3,718	2,223	10	10	10,720	10,280	17,825
	TS700	7,025	3,935	2,389	10	10	10,380	9,940	18,066
	TS750	7,525	4,102	2,555	10	10	10,080	9,650	18,158

※ : Standard

130D-9



Mast Type	Maximum Fork Height	Overall Mast Height (Lowered)	FREE LIFT	Tilting Angle		Load capacity (600mm LC)		Truck Weight (Unloaded)	
				Fwd	Bwd	General	Integral side shift with Fork Positioner		
				deg	deg	kg	kg		
	mm	mm	mm	deg	deg	kg	kg	kg	
2-STAGE LIMITED FREE LIFT	※V300	3,005	3,000	0	15	12	13,000	13,000	16,991
	V330	3,305	3,150	0	15	12	13,000	13,000	17,067
	V350	3,505	3,250	0	15	12	13,000	13,000	17,117
	V400	4,005	3,550	0	15	12	13,000	13,000	17,369
	V450	4,505	3,800	0	15	12	13,000	13,000	17,494
	V500	5,005	4,100	0	15	12	13,000	13,000	17,644
	V550	5,505	4,350	0	15	12	13,000	12,590	17,874
	V600	6,005	4,650	0	15	12	12,610	12,210	18,026
	V650	6,505	4,900	0	15	12	12,250	11,840	18,159
	V700	7,005	5,150	0	15	12	11,900	11,490	18,290
2-STAGE FULL FREE LIFT	VS300	3,028	3,000	1,545	10	10	13,000	13,000	17,166
	VS350	3,528	3,250	1,795	10	10	13,000	13,000	17,306
	VS400	4,028	3,500	2,045	10	10	13,000	13,000	17,447
	VS450	4,528	3,750	2,295	10	10	13,000	13,000	17,593
	VS500	5,028	4,000	2,545	10	10	13,000	12,770	17,850
	VS550	5,528	4,250	2,795	10	10	12,640	12,350	18,068
	VS600	6,028	4,600	3,045	10	10	12,200	11,950	18,315
3-STAGE FULL FREE LIFT	TS450	4,521	2,950	1,555	10	10	13,000	12,850	18,186
	TS500	5,025	3,117	1,725	10	10	12,860	12,450	18,277
	TS550	5,525	3,284	1,891	10	10	12,480	12,070	18,369
	TS600	6,023	3,551	2,055	10	10	12,100	11,690	18,514
	TS650	6,525	3,718	2,223	10	10	11,750	11,340	18,606
	TS700	7,025	3,935	2,389	10	10	11,380	10,980	18,847
	TS750	7,525	4,102	2,555	10	10	11,060	10,660	18,939

※ : Standard

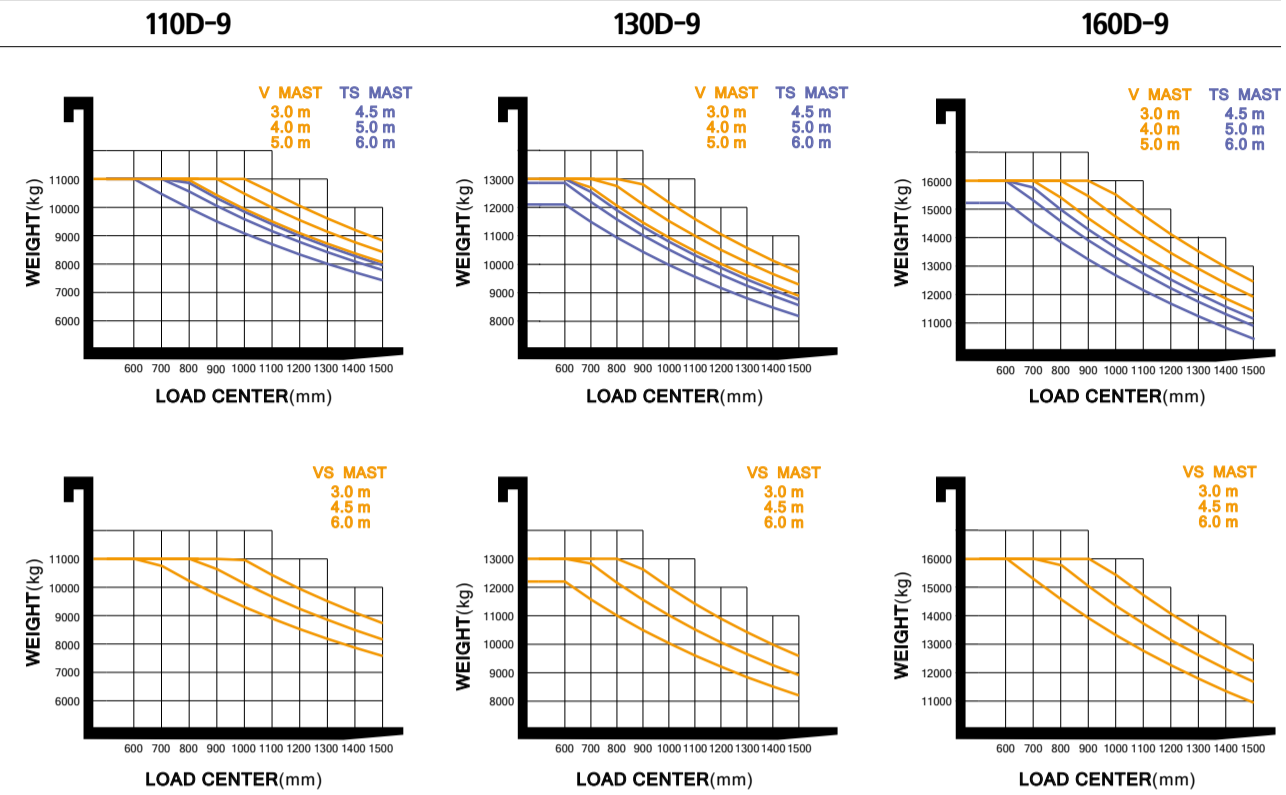
160D-9



Mast Type	Maximum Fork Height	Overall Mast Height (Lowered)	Free Lift	Tilting Angle		Load capacity (600mm LC)		Truck Weight (Unloaded)	
				Fwd	Bwd	General	Integral side shift with Fork Positioner		
				deg	deg	kg	kg		
	mm	mm	mm	deg	deg	kg	kg	kg	
2-STAGE LIMITED FREE LIFT	※V300	3,010	3,250	0	15	12	16,000	16,000	19,843
	V330	3,310	3,400	0	15	12	16,000	16,000	19,937
	V350	3,510	3,500	0	15	12	16,000	16,000	19,982
	V400	4,010	3,750	0	15	12	16,000	16,000	20,270
	V450	4,510	4,000	0	15	12	16,000	16,000	20,424
	V500	5,010	4,300	0	15	12	16,000	16,000	20,607
	V550	5,510	4,550	0	15	12	16,000	16,000	20,875
	V600	6,010	4,850	0	15	12	16,000	15,710	21,057
	V650	6,510	5,125	0	15	12	15,700	15,260	21,223
	V700	7,010	5,375	0	15	12	15,270	14,830	21,375
2-STAGE FULL FREE LIFT	VS300	3,010	3,200	1,550	10	10	16,000	16,000	19,872
	VS330	3,310	3,350	1,700	10	10	16,000	16,000	19,951
	VS350	3,510	3,450	1,800	10	10	16,000	16,000	20,016
	VS400	4,010	3,700	2,050	10	10	16,000	16,000	20,179
	VS450	4,510	3,950	2,300	10	10	16,000	16,000	20,435
	VS500	5,010	4,250	2,550	10	10	16,000	16,000	20,633
	VS550	5,510	4,500	2,800	10	10	16,000	16,000	20,827
	VS600	6,010	4,800	3,050	10	10	16,000	15,610	21,088
3-STAGE FULL FREE LIFT	TS450	4,516	2,950	1,500	10	10	16,000	15,590	20,946
	TS500	5,017	3,167	1,667	10	10	16,000	15,090	21,147
	TS550	5,515	3,333	1,833	10	10	15,680	14,630	21,295
	TS600	6,016	3,550	2,000	10	10	15,220	14,170	21,491
	TS650	6,517	3,717	2,167	10	10	14,800	13,750	21,649
	TS700	7,015	3,933	2,333	10	10	14,360	13,300	21,962
	TS750	7,515	4,100	2,501	10	10	13,960	12,900	22,125

※ : Standard

Load Capacity



Optional Items

- Fork (L x W x T) (mm)
110D-9 : 75 x 200 x 1,200 / 75 x 200 x 1,500 / 75 x 200 x 1,800 / 75 x 200 x 2,100 / 85 x 200 x 2,440 / 85 x 200 x 2,600
130D-9 : 85 x 200 x 1,200 / 85 x 200 x 1,500 / 85 x 200 x 1,800 / 85 x 200 x 2,100 / 85 x 200 x 2,440 / 90 x 200 x 2,600
160D-9 : 90 x 200 x 1,200 / 90 x 200 x 1,500 / 95 x 200 x 1,800 / 95 x 200 x 2,100 / 95 x 200 x 2,440 / 100 x 200 x 2,600
- MAST : Simplex Mast / Duplex Mast / Triplex Mast
- MCV : 3-Spool / 5-Spool
- Fork positioner : $\varnothing 82$ / $\varnothing 100$
- Integral Side Shift + Fork Positioner
- Separator Holder Type Fork Carriage
- Hydraulic Line : 3-Spool / 4-Spool / 5-Spool
- Wide Carriage (2,730mm)(160D-9)
- Air Compressor
- Seat : Heat, Leather / KAB Air-Suspension Heat Seat
- Bluetooth Hands Free
- Beacon Lamp (LED)
- Air Conditioner & Heater
- Rear View Camera
- Load weight indicator
- Solid Tire
- Top Wiper
- RMS(Remote Management System)
- Rear Wheel Angle Monitoring
- Cabin

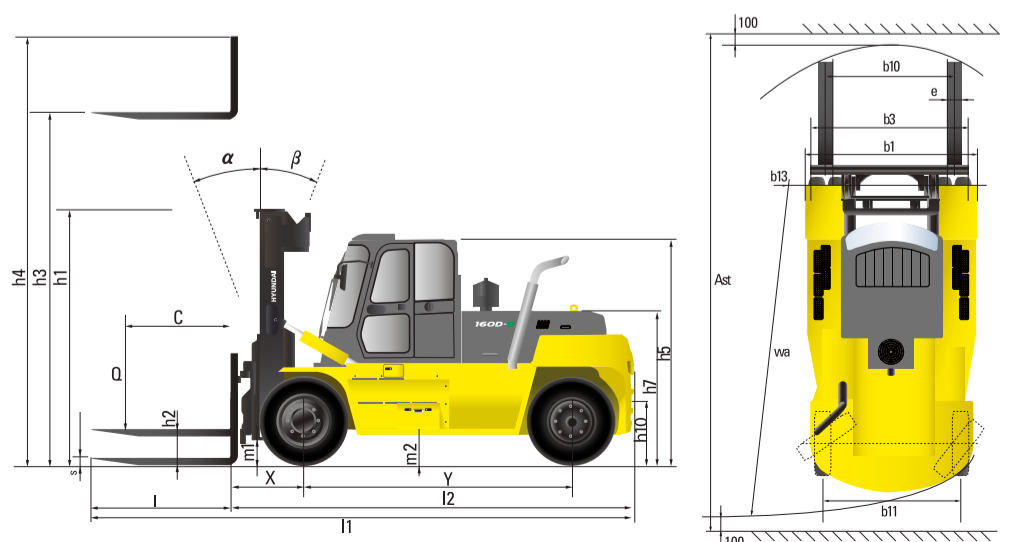
New 9 Series

Specification

Identification					
1.1	Manufacturer	Hyundai			
1.2	Manufacturer's type designation	110D-9	130D-9	160D-9	
1.3	Drive : electric(battery or mains) ,diesel, petrol ,fuel gas, manual	Diesel	Diesel	Diesel	
1.4	Type of operation : hand, pedestrian, standing, seated, order - picker	Seated	Seated	Seated	
1.5	Load capacity / rated load	kg	11,000	13,000	16,000
1.6	Load center distance	c mm	600	600	600
1.8	Load distance, center of drive axle to fork	x mm	750	770	815
1.9	Wheelbase	y mm	3,050	3,050	3,450
Weights					
2.1	Service weight	kg	16,274	16,991	19,842
2.2	Axle loading, loaded front / rear	kg	23,960 / 3,315	26,775 / 3,216	32,009 / 3,834
2.3	Axle loading, unloaded front / rear	kg	8,055 / 8,219	7,988 / 9,003	9,446 / 10,396
Wheels, Chassis					
3.1	Tire type: solid (V), pneumatic (P), non-marking		P	P	P
3.2	Tires size, front		10.00 - 20 - 16PR	10.00 - 20 - 16PR	12.00 - 20 - 18PR
3.3	Tires size, rear		10.00 - 20 - 16PR	10.00 - 20 - 16PR	12.00 - 20 - 18PR
3.5	Wheels, number front rear (x = driven wheels)		4 x 2	4 x 2	4 x 2
3.6	Track width, front	b10 mm	1,842	1,842	1,842
3.7	Track width, rear	b11 mm	1,910	1,910	1,960
Basic Dimensions					
4.1	Tilting Angle (forward / backward)	α / β deg	15 / 12	15 / 12	15 / 12
4.2	Lowered mast height	h1 mm	3,000	3,000	3,250
4.3	Lift height	h3 mm	3,005	3,005	3,010
4.4	Extended mast height	h4 mm	4,465	4,465	4,710
4.5	Overhead guard (cab) height	h5 mm	2,945	2,945	2,980
4.6	Seat height / rel. to SIP	h7 mm	1,786	1,786	1,824
4.7	Coupling height	h10 mm	560	560	598
4.8	Overall length	l1 mm	5,920	5,930	6,430
4.9	Length to face of forks	l2 mm	4,570	4,580	5,080
4.10	Overall width	b1 mm	2,450	2,450	2,497
4.11	Fork dimension	s / e / l1 mm	75 x 200 x 1,350	85 x 200 x 1,350	90 x 200 x 1,350
4.12	Fork carriage width	b3 mm	2,362	2,362	2,488
4.13	Ground clearance, loaded, under mast	m1 mm	250	250	250
4.14	Ground clearance, centre of wheelbase	m2 mm	331	332	369
4.15	Aisle width for pallets 1,000 x 1,200 crossways	Ast mm	6,655	6,660	7,280
4.16	Aisle width for pallets 800 x 1,200 lengthways	Ast mm	6,655	6,660	7,280
4.17	Turning radius	Wa mm	4,350	4,350	4,895
4.18	Smallest pivot point distance	b13 mm	1,634	1,634	1,865

Performance Data					
5.1	Travel speed, unloaded	km/h	39.5	39.5	33.3
5.2	Lift speed, loaded / unloaded	mm/s	440 / 510	430 / 510	350 / 450
5.3	Lowering speed, loaded / unloaded	mm/s	510 / 460	510 / 460	430 / 390
5.5	Drawbar pull, Loaded	kgf	12338	12482	14677
5.7	Gradient performance, Loaded	% (°)	45.4 (24.4)	41.1 (22.3)	40.3 (21.9)
5.10	Service brake		Hydraulic	Hydraulic	Hydraulic
Engine					
7.1	Engine manufacturer / type		Cummins QSB6.7	Cummins QSB6.7	Cummins QSB6.7
7.2	Engine power acc. to ISO 1585	kW / rpm	122 / 2,300	122 / 2,300	122 / 2,300
7.3	Max. torque	kgf.m/rpm	74.7 / 1,500	74.7 / 1,500	74.7 / 1,500
7.4	Number of cylinders / displacement	EA/cc	6 / 6,690	6 / 6,690	6 / 6,690
Addition data					
8.2	Operating pressure for attachments(system/attach)	kgf/cm ²	210 / 165	210 / 165	210 / 165
8.3	Oil volume for attachments	ℓ / min	159	159	179

Dimension



* All specifications in this catalog are subject to change according to the optional items.

