

35/40/45D-9A **50DA-9A**

Diesel Counterbalance Trucks

MOVING YOU FURTHER

HYUNDAI HEAVY INDUSTRIES



 **HYUNDAI**

Your satisfaction is **our priority!**

Hyundai introduces a new line of **9-series** diesel forklift trucks. The newly designed 4 wheel counterbalance trucks provide every operator comfortable driving, increased productivity and easy maintenance.



New Diesel Forklift with Proven Quality and Advanced Technology

- **Reliable engine**
- **High drive and lift performance**
- **Simple but efficient hydraulic system**
- **Spacious operator's cab**
- **5.6 inch LCD color monitor**
- **OPSS system for safe operation**
- **Easy serviceability**



High Efficiency & **Optimal Performance**



Max. Travel Speed

Model	Km / h
35D-9A	27.7
40D-9A	26.7
45D-9A	26.7
50DA-9A	26.6

Max. Gradeability

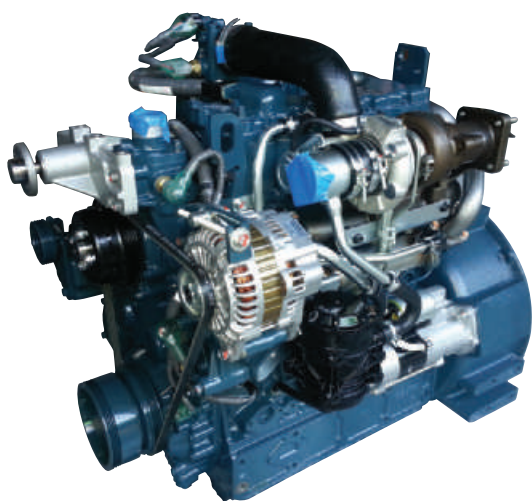
Model	%
35D-9A	47.0
40D-9A	41.6
45D-9A	37.8
50DA-9A	34.6

Faster Travel Speed and Gradeability

The powerful high-output engine provides greater acceleration, better gradeability and faster travel speed on any tough terrain or slope.

Powerful engine and high technology systems provide you with enhanced performance and highest productivity.

35/40/45D-9A
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KUBOTA V3800 Engine

70.2kW / 2,200 rpm

KUBOTA V3800 Engine has been designed to comply with the most rigid emission regulations the EPA Interim Tier-IV and the EU Stage IIIB. NOx is reduced only by mechanical means such as a cooled exhaust gas recirculation(EGR) system.

In addition, innovative emission solutions, such as an aftertreatment device, have been intergrated into it.

The common Rail System has made it possible to optimize combustion and create more durable, quiet, and improved fuel-economy engine.

By meticulously screening and controlling the exhaust gas aftertreatment components, Diesel Oxidation Catalyst (DOC) and Diesel Particulate Filter (DPF), KOBOTA V3800 engine provide you high-performance and cleanliness.



Highly Durable Transmission

Powershift transmission of forward 2 stages and reverse 2 stages provides fast travel speed and quiet travel under any heavy load condition, and enhances work efficiency.

The clutch protection system prevents excessive use of inching as well as minimizes change-impact.



Highly Durable Drive Axle

The strengthened drive axle separable from transmission ensures low vibration and easy maintenance. The wet disc type brake is applied for easy operation, smooth response and maintenance free.

Optimised Ergonomics



Spacious Operator Cabin

The newly designed cabin provides wide visibility and spacious environment, ensuring all day comfort for the operator.



Improved Overhead Guard

The increased height of overhead guard will be standard on 9 series for operator convenience. And a lower overhead guard is still available to enable use inside the container.

The ergonomically designed cabin provides full support and comfort to the operator.

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Comfortable Grammer Seat

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 (OPT)



Adjustable Steering Wheel

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



Optimized Pedal Position

On the 9-series the pedals are mounted to the console to reduce operator fatigue, and noise and dust from the engine compartment.



KAB Seat (Optional)



Low Entrance Height

The low entrance height ensures easy and safe access for the operator.

Driver Comfort



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.



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.

The new style of exterior and LCD color monitor maximize driver comfort.

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Advanced LCD Monitor

The 5.6 inch wide screen LCD color monitor allows the operator to control the machine with ease. The monitor features speed, travel direction and hour meter. The operator can easily check the A/S information through Maintenance Management Display.

Automatic Gear Box

The automatic gear box provides smooth and fast gear change ensuring maximum torque at any speed.

- 1) The second gear is selected when the travel speed reaches 5 km/h during acceleration.
- 2) The first gear is selected when the travel speed is at 3 km/h during deceleration.



DCSR (Direction Change Shock Relieve)

- 1) Gear selection to Neutral (without Brake) on condition of high speed. (T/M-neutral)
- 2) Shock prevention at T/M, Drive Axle

Clutch Protection System

- 1) The warning lamp alerts the driver when the clutch slips more than 2 seconds.
- 2) The buzzer will sound when accelerator is pushed on the upper condition.

Advanced **Safety**



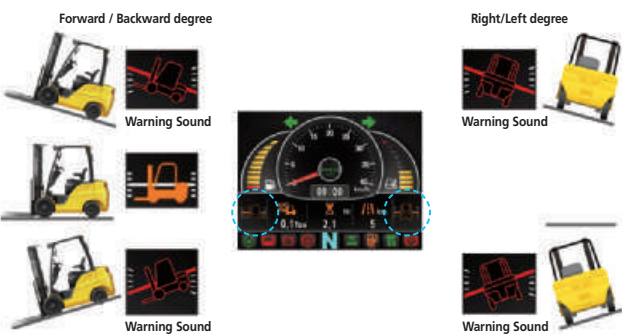
Maximum speed indicator and Speed limiter

When the speed indicator is active the machine will warn the driver when the pre set speed is reached. Optional a speed limiter is available that will then limit the speed to the programmed value.



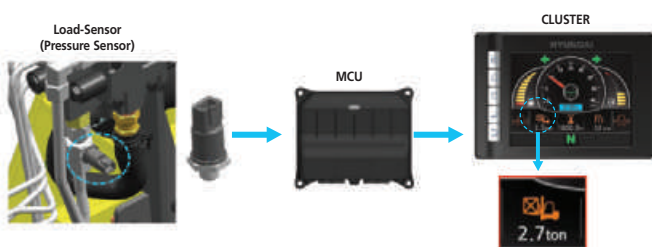
ESL (Engine Start Limit)

The machine can be protected by a numeric code. It's possible to start the engine only when this code is entered. (Theft prevention)



Truck Inclination Warning System

To improve the productivity and safety, the truck inclination warning system will monitor and indicate forward/backward, right/left degree of the forklift. The alarm alerts the operator when the forklift degree is over the ISO standard.



Load indicator (Option)

The optional load indicator displays the load weight in the monitor. The load sensor reduces the time to check loaded weight and the alarm alerts the driver when overloaded.

The improved safety features provide the operator safe and efficient work.

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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.



Rear View Camera on Machine Display

Control type 1
Interlock with Gear

Control type 1
Select Camera Button



Fast and Easy Maintenance

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



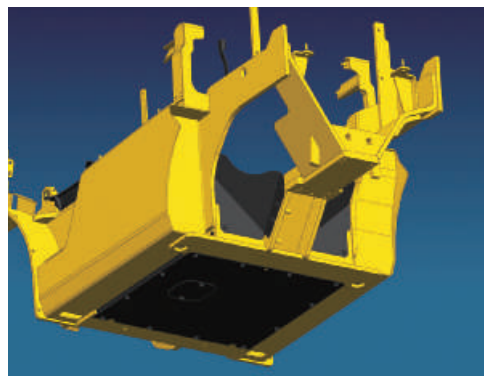
Large Engine Hood

Highly accessible engine compartment assures fast and efficient maintenance. The enlarged air cleaner (8") extended service time of engine.



Waterproof and Dustproof Cover

Newly developed Waterproof and Dustproof fuse box and relay box are mounted in one place for ease of maintenance.



Rear Tire Cover

The rear tire cover with PE material is equipped to prevent clogging of the radiator from foreign substances.

New 9 Series

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Mast Specification (35D-9A)

Mast Type	Maximum Fork Height	Overall Height (Lowered)		Free Lift Height		Tilt Angle Forward / Backward	Load Capacity without side shift at (600 mm LC)		Load Capacity with side shift at (600 mm LC)		Truck Weight (Unloaded)		
		Single Tire	Double Tire	With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire	
		(mm)	(mm)	(mm)	(mm)		(mm)	(deg)	(kg)	(kg)	(kg)	(kg)	(kg)
2-Stage Limited free lift	V270	2720	2085	2070	120	120	8 / 10	3500	3500	3500	3500	5806	5961
	* V300	3020	2235	2220	120	120	8 / 10	3500	3500	3500	3500	5836	5991
	V330	3320	2385	2370	120	120	8 / 10	3500	3500	3500	3500	5874	6029
	V350	3520	2535	2520	120	120	8 / 10	3500	3500	3500	3500	5897	6052
	V370	3720	2635	2620	120	120	8 / 10	3500	3500	3500	3500	5917	6072
	V400	4020	2845	2830	120	120	8 / 10	3500	3500	3400	3450	5960	6114
	V450	4520	3095	3080	120	120	8 / 6	3400	3400	3300	3350	6072	6227
V500	5020	3345	3330	120	120	8 / 6	3500	3500	3200	3250	6123	6278	
2-Stage full free lift	VF280	2805	2135	2120	1258	919	8 / 8	3500	3500	3500	3500	5847	5999
	VF300	3005	2235	2220	1358	1019	8 / 8	3500	3500	3500	3500	5873	6025
	VF315	3155	2325	2310	1448	1109	8 / 8	3500	3500	3500	3500	5893	6045
3-Stage full free lift	TF/TS 370	3730	2035	2020	822	1149	8 / 6	3500	3500	3350	3450	6063	6218
	TF/TS 400	4030	2135	2120	922	1249	8 / 6	3500	3500	3300	3400	6093	6248
	TF/TS 430	4330	2235	2220	1022	1349	8 / 8	3500	3500	3250	3300	6124	6279
	TF/TS 450	4510	2295	2290	1082	1409	8 / 8	3500	3500	3200	3300	6143	6298
	TF/TS 470	4720	2385	2390	1172	1499	8 / 8	3400	3500	3150	3250	6179	6334
	TF/TS 500	5020	2485	2470	1272	1599	8 / 6	3300	3400	3100	3200	6202	6357
	TF/TS 550	5520	2665	2650	1452	1779	8 / 6	3200	3300	2850	3100	6264	6418
	TF/TS 600	6030	2845	2830	1632	1959	8 / 6	3100	3200	2450	3000	6332	6487
TF/TS 650	6530	3025	3010	1812	2139	8 / 6	3000	3000	2350	2900	6374	6528	

Mast Specification (40D-9A)

Mast Type	Maximum Fork Height	Overall Height (Lowered)		Free Lift Height		Tilt Angle Forward / Backward	Load Capacity without side shift at (600 mm LC)		Load Capacity with side shift at (600 mm LC)		Truck Weight (Unloaded)		
		Single Tire	Double Tire	With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire	
		(mm)	(mm)	(mm)	(mm)		(mm)	(deg)	(kg)	(kg)	(kg)	(kg)	(kg)
2-Stage Limited free lift	V270	2720	2085	2070	120	120	8 / 10	4000	4000	4000	4000	6245	6351
	* V300	3020	2235	2220	120	120	8 / 10	4000	4000	4000	4000	6275	6381
	V330	3320	2385	2370	120	120	8 / 10	4000	4000	4000	4000	6313	6419
	V350	3520	2535	2520	120	120	8 / 10	4000	4000	4000	4000	6336	6442
	V370	3720	2635	2620	120	120	8 / 10	4000	4000	3950	3950	6356	6462
	V400	4020	2845	2830	120	120	8 / 10	4000	4000	3900	3900	6398	6505
	V450	4520	3095	3080	120	120	8 / 6	4000	4000	3800	3800	6511	6617
V500	5020	3345	3330	120	120	8 / 6	3900	4000	3700	3700	6562	6668	
2-Stage full free lift	VF280	2805	2135	2120	1258	919	8 / 8	4000	4000	4000	4000	6286	6389
	VF300	3005	2235	2220	1358	1019	8 / 8	4000	4000	4000	4000	6312	6415
	VF315	3155	2325	2310	1448	1109	8 / 8	4000	4000	4000	4000	6331	6434
3-Stage full free lift	TF/TS 370	3730	2035	2020	807	1134	8 / 8	4000	4000	3900	3950	6502	6573
	TF/TS 400	4030	2135	2120	907	1234	8 / 8	4000	4000	3850	3850	6532	6603
	TF/TS 430	4330	2235	2220	1007	1334	8 / 8	4000	4000	3800	3800	6563	6634
	TF/TS 450	4510	2295	2290	1067	1394	8 / 8	4000	4000	3800	3800	6582	6653
	TF/TS 470	4720	2385	2390	1157	1484	8 / 8	4000	4000	3700	3750	6618	6689
	TF/TS 500	5020	2485	2470	1257	1584	8 / 6	3900	3900	3600	3650	6641	6712
	TF/TS 550	5520	2665	2650	1437	1764	8 / 6	3700	3800	3350	3500	6702	6773
	TF/TS 600	6030	2845	2830	1617	1944	8 / 6	3600	3600	2950	3400	6771	6842
TF/TS 650	6530	3025	3010	1797	2124	8 / 6	3500	3500	2850	3300	6812	6883	

New 9 Series

Mast Specification (45D-9A)

Mast Type	Maximum Fork Height	Overall Height (Lowered)		Free Lift Height		Tilt Angle Forward / Backward	Load Capacity without side shift at (600 mm LC)		Load Capacity with side shift at (600 mm LC)		Truck Weight (Unloaded)		
		Single Tire	Double Tire	With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire	
		(mm)	(mm)	(mm)	(mm)		(mm)	(deg)	(kg)	(kg)	(kg)	(kg)	(kg)
2-Stage Limited free lift	V270	2720	2085	2070	120	120	8 / 10	4500	4500	4500	4500	6653	6762
	* V300	3020	2235	2220	120	120	8 / 10	4500	4500	4500	4500	6683	6792
	V330	3320	2385	2370	120	120	8 / 10	4500	4500	4500	4500	6721	6829
	V350	3520	2535	2520	120	120	8 / 10	4500	4500	4500	4450	6744	6853
	V370	3720	2635	2620	120	120	8 / 10	4500	4500	4400	4400	6764	6873
	V400	4020	2845	2830	120	120	8 / 10	4500	4500	4350	4350	6806	6915
	V450	4520	3095	3080	120	120	8 / 6	4500	4500	4200	4200	6919	7028
2-Stage full free lift	V500	5020	3345	3330	120	120	8 / 6	4400	4400	4050	4050	6970	7079
	VF280	2805	2135	2120	1258	919	8 / 8	4500	4500	4500	4500	6689	6798
	VF300	3005	2235	2220	1358	1019	8 / 8	4500	4500	4500	4500	6715	6824
	VF315	3155	2325	2310	1448	1109	8 / 8	4500	4500	4500	4500	6734	6843
3-Stage full free lift	TF/TS 370	3730	2035	2020	796	1114	8 / 8	4500	4500	4350	4350	6910	7021
	TF/TS 400	4030	2135	2120	896	1214	8 / 8	4500	4500	4300	4250	6940	7051
	TF/TS 430	4330	2235	2220	996	1314	8 / 8	4500	4500	4200	4200	6971	7082
	TF/TS 450	4510	2295	2290	1056	1374	8 / 8	4500	4500	4150	4150	6990	7101
	TF/TS 470	4720	2385	2390	1145	1484	8 / 8	4400	4400	4100	4050	7026	7137
	TF/TS 500	5020	2485	2470	1246	1564	8 / 6	4300	4300	4000	4000	7049	7161
	TF/TS 550	5520	2665	2650	1426	1744	8 / 6	4200	4200	3850	3850	7110	7222
	TF/TS 600	6030	2845	2830	1606	1924	8 / 6	4000	4000	3250	3750	7179	7290
	TF/TS 650	6530	3025	3010	1786	2104	8 / 6	3900	3900	3150	3650	7220	7332

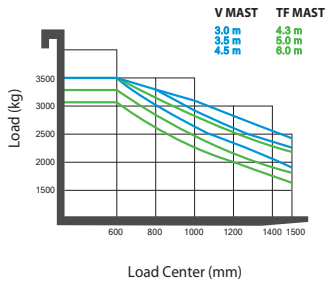
Mast Specification (50DA-9A)

Mast Type	Maximum Fork Height	Overall Height (Lowered)		Free Lift Height		Tilt Angle Forward / Backward	Load Capacity without side shift at (600 mm LC)		Load Capacity with side shift at (600 mm LC)		Truck Weight (Unloaded)		
		Single Tire	Double Tire	With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire	
		(mm)	(mm)	(mm)	(mm)		(mm)	(deg)	(kg)	(kg)	(kg)	(kg)	(kg)
2-Stage Limited free lift	V260	2630	2085	2070	120	120	8 / 10	5000	5000	5000	5000	7081	7197
	* V290	2930	2235	2220	120	120	8 / 10	5000	5000	5000	5000	7157	7273
	V320	3230	2385	2370	120	120	8 / 10	5000	5000	5000	5000	7131	7247
	V340	3430	2535	2520	120	120	8 / 10	5000	5000	4950	4950	7156	7272
	V360	3630	2635	2620	120	120	8 / 10	5000	5000	4900	4900	7172	7288
	V390	3930	2845	2830	120	120	8 / 10	5000	5000	4800	4800	7208	7324
	V440	4430	3095	3080	120	120	8 / 6	4900	5000	4650	4650	7311	7427
2-Stage full free lift	V490	4930	3345	3330	120	120	8 / 6	4800	4900	4500	4500	7353	7469
	VF270	2697	2135	2120	905	1223	8 / 8	5000	5000	4700	4750	7140	7252
	VF290	2897	2235	2220	1005	1323	8 / 8	5000	5000	4650	4700	7165	7277
	VF305	3047	2325	2310	1095	1413	8 / 8	5000	5000	4550	4600	7183	7295
3-Stage full free lift	TF/TS 360	3672	2035	2020	807	1074	8 / 8	5000	5000	4700	4800	7324	7428
	TF/TS 390	3972	2135	2120	907	1174	8 / 8	5000	5000	4650	4700	7351	7454
	TF/TS 420	4272	2235	2220	1007	1274	8 / 8	4900	5000	4550	4600	7375	7479
	TF/TS 440	4452	2295	2280	1067	1334	8 / 8	4800	5000	4500	4550	7392	7496
	TF/TS 460	4662	2385	2370	1157	1424	8 / 8	4700	4900	4450	4500	7415	7519
	TF/TS 490	4962	2485	2470	1257	1524	8 / 6	4600	4800	4350	4450	7441	7544
	TF/TS 540	5462	2665	2650	1437	1704	8 / 6	4500	4700	4250	4300	7493	7596
	TF/TS 590	5972	2845	2830	1617	1884	8 / 6	4400	4600	4100	4200	7533	7637
	TF/TS 640	6482	3025	3010	1797	2064	8 / 6	4300	4500	4000	4100	7574	7678

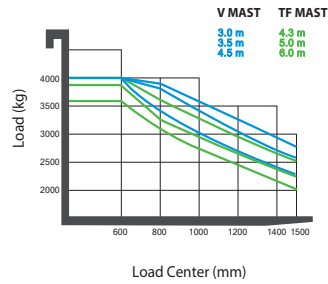
35/40/45D-9A 50DA-9A

Load Capacity

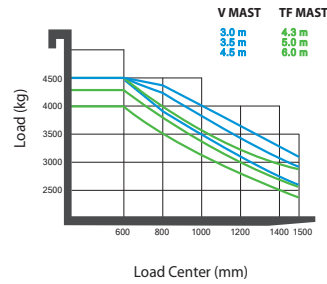
35D-9A



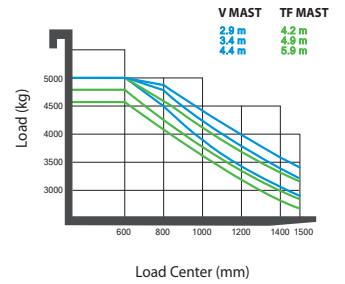
40D-9A



45D-9A



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Optional Items

- Fork (mm)

35/40D-9A : 1220, 1370, 1520, 1670, 1820, 1970

45D-9A : 1070, 1370, 1520, 1670, 1820, 1970

50DA-9A : 1350, 1500, 1800, 2000, 2400

- Overshoe (mm)

1600, 1800, 2000, 2200

- Integral Sideshift

- Integral Fork Positioner

- Tire : Pneumatic (standard)/ Solid / Non-marking/ Double (Front tire)

- Seat : KAB

- M.C.V : 2-Spool, 3-Spool, 4-Spool (standard), 5-Spool

- Load Indicator

- Beacon Lamp

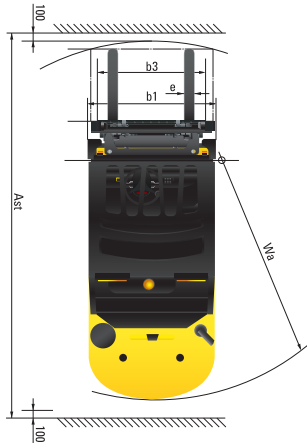
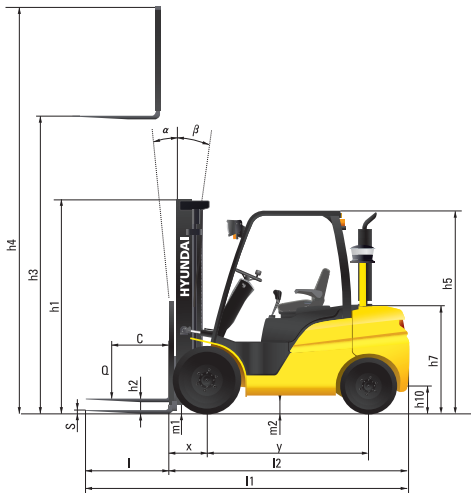
- Work Lamp

- Cabin (Heater & Air Conditioner)

- Rear View Camera

- Container overhead guard

Dimensions



Specifications

Identification		HYUNDAI			
1.1	Manufacturer	HYUNDAI			
1.2	Type	35D-9A	40D-9A	45D-9A	50DA-9A
1.3	Drive: Electric, Diesel, LPG Gas	DIESEL	DIESEL	DIESEL	DIESEL
1.4	Type of operation: hand, pedestrian, standing, seated, order-picker	seated	seated	seated	seated
1.5	Load capacity (standard) Q (kg)	3,500	4,000	4,500	5,000
1.6	Load center distance c (mm)	600	600	600	600
1.8	Load distance, center of drive axle to forks x (mm)	561	561	561	576
1.9	Wheelbase y (mm)	2,000	2,000	2,000	2,000
Weights					
2.1	Service weight kg	5,836	6,381	6,792	7,273
2.2	Axle loading, loaded front / rear kg	8,277 / 1,059	9,193 / 1,187	9,981 / 1,311	10,813 / 1,460
2.3	Axle loading, unloaded front / rear kg	2,747 / 3,089	2,873 / 3,507	2,871 / 3,921	2,913 / 4,360
Wheels, Chassis					
3.1	Tires : solid rubber (V), superelastic (SE), pneumatic (P), polyurethane (PE)	pneumatic	pneumatic	pneumatic	pneumatic
3.2	Tires size, front (Ø x width)	8.25-15 14PR	7.50-16 12PR	7.50-16 12PR	7.50-16 12PR
3.3	Tires size, rear (Ø x width)	7.00-12 12PR	7.00-12 12PR	7.00-12 12PR	7.00-12 14PR
3.5	Wheels, number front rear (x = driven wheels)	2x2	4x2	4x2	4x2
3.6	Track width, front b10 (mm)	1,132	1,282	1,282	1,282
3.7	Track width, rear b11 (mm)	1,140	1,140	1,140	1,140
Basic Dimensions					
4.1	Mast / fork carriage tilt forward / backward degrees	8 / 10	8 / 10	8 / 10	8 / 10
4.2	Lowered mast height (standard) h1 (mm)	2,235	2,220	2,220	2,220
4.3	Free lift h2 (mm)	120	120	120	120
4.4	Lift height (standard) h3 (mm)	3,020	3,020	3,020	2,930
4.5	Extended mast height (standard) h4 (mm)	4,234	4,234	4,234	4,234
4.7	Overhead load guard (cab) height h5 (mm)	2,220	2,210	2,210	2,210
4.8	Seat height / standing height h7 (mm)	1,070	1,070	1,070	1,070
4.12	Coupling height h10 (mm)	364	364	364	364
4.19	Overall length l1 (mm)	4,180	4,235	4,455	4,500
4.20	Length to face of forks l2 (mm)	3,110	3,165	3,235	3,300
4.21	Overall width b1 (mm)	1,370	1,740	1,740	1,740
4.22	Fork dimensions (hook type) LxWxT s / e / l (mm)	1,070 x 122 x 50	1,070 x 150 x 50	1,220 x 150 x 50	1,200 x 150 x 60
4.23	Fork carriage ISO 2328, class / type A,B	III / A	III / A	IV / A	IV / A
4.24	Fork carriage width b3 (mm)	1,300	1,600	1,600	1,600
4.31	Ground clearance, loaded, under mast m1 (mm)	170	155	155	155
4.32	Ground clearance, centre of wheelbase m2 (mm)	215	205	205	200
4.33	Aisle width for pallets 1000 x 1200 crossways (L x W) Ast (mm)	4,629	4,676	4,726	4,771
4.34	Aisle width for pallets 800 x 1200 lengthways (W x L) Ast (mm)	4,829	4,876	4,926	4,971
4.35	Turning radius Wa (mm)	2,868	2,915	2,965	3,010
4.36	Internal turning radius b13 (mm)	1,009	1,009	1,009	1,009
Performance Data					
5.1	Travel speed, loaded / unloaded (1/2) km/h	27.7	26.7	26.7	26.6
5.2	Lift speed, loaded / unloaded mm/s	520 / 540	510 / 540	500 / 540	430 / 460
5.3	Lowering speed, loaded / unloaded mm/s	500 / 500	500 / 500	500 / 500	500 / 500
5.5	Drawbar pull, loaded kg	4,410	4,433	4,443	4,453
5.7	Gradient performance, loaded %	47.0	41.6	37.8	34.6
5.10	Service brake	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Engine					
6.1	Engine manufacturer / type	Kubota V3800	Kubota V3800	Kubota V3800	Kubota V3800
6.2	Engine power acc. To ISO 1585 kW/rpm	70.2 / 2,200	70.2 / 2,200	70.2 / 2,200	70.2 / 2,200
6.3	Maximum Torque kg.f.m/rpm	34.2 / 1,500	34.2 / 1,500	34.2 / 1,500	34.2 / 1,500
6.4	No. of cylinder / cubic capacity anz/cm ³	4 / 3,769	4 / 3,769	4 / 3,769	4 / 3,769
6.5	Fuel consumption acc. to VDI cycle ℓ/h	5.6	5.7	5.8	5.9
Other Details					
8.1	Type of drive control	Power Shift 2/2	Power Shift 2/2	Power Shift 2/2	Power Shift 2/2
8.2	Operating pressure (system/attachments) kg.f/cm ²	210 / 150	210 / 150	210 / 150	210 / 150
8.3	Hydraulic oil flow (attachments) ℓ	66	66	66	66
8.4	Sound level at driver's ear according to DIN 12053 (±2)db(A)	81.7	81.7	81.7	81.7

* Standard and optional equipment may vary per country. Contact your Hyundai dealer for more information.

* 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



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