

22/25/30/33D-9S

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

- **Maximum performance**
- **Spacious operator's cab**
- **Switch type parking brake**
- **5.6 inch LCD color monitor**
- **Truck inclination warning system**
- **Load weight indicator (Optional)**
- **Auto fork leveling system (Optional)**
- **OPSS System for safe operation**
- **Easy serviceability**



High Efficiency & **Optimal Performance**



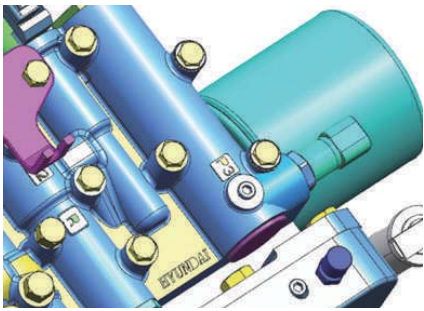
KUBOTA V3600 Engine 48.1kW / 2,300 rpm

High Power Engine - KUBOTA V3600

Market approved quality of KUBOTA V3600 engine ensures incomparable performance, durability and excellent fuel efficiency. This engine meets EPA Tier-III and EU stage IIIA emission regulations.

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

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Clutch Protection System

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



Boosting type brake valve

The boosting type brake valve is applied for strong braking performance.



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.



Integrated wheel rim

The integrated wheel rim provides significantly increased service life.



Fully hydrostatic power steering

The hydraulic steering system always guarantees smooth and flexible steering, preventing over-run and kick-back.



Max. Travel Speed

Model	Km / h
22D-9S	18.4
25D-9S	18.4
30D-9S	19.8
33D-9S	19.8

Max. Gradeability

Model	%
22D-9S	47.2
25D-9S	42.0
30D-9S	32.4
33D-9S	29.9

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.

Best Convenience & Optimised Ergonomics



Spacious Operator Cabin

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



Optimized pedal position and floor mat

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



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.



Comfortable Grammer Seat

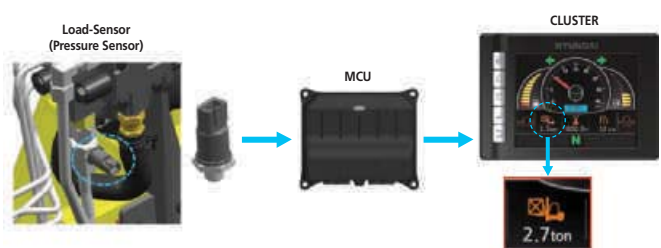
Easily adjustable suspension seat, based on a human engineering design, reduces operator fatigue and provides greater comfort.

*ELR (Energy Locking Retractor) Type Seat Belt

*Heating and Head-rest (OPT)

The ergonomically designed cabin and the new style LCD color monitor provides full support and comfort to the operator.

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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.



Auto fork leveling system (Optional)

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

Advanced **Safety**



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.



Strong overhead guard

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



Steel side cover

The strengthened steel side cover provides enhanced durability.

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

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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.



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.

Fast and Easy Maintenance



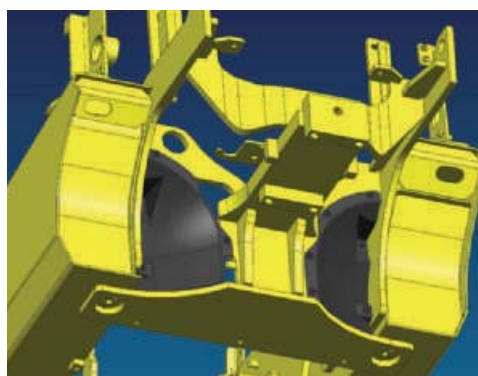
Large Engine Hood

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.

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

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Rear view camera
(Optional)

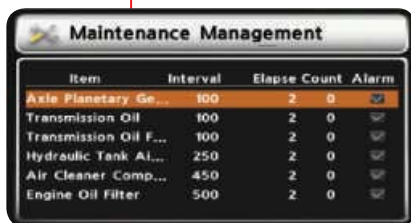


Parking Brake Switch



Emergency switch

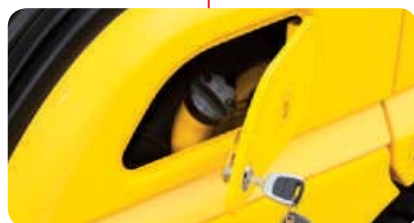
With auto parking function when the operator is not in the seat



Maintenance Management display



Password starting system
(Anti-theft system)



Fuel cap with key

New 9 Series

Mast Specification (22D-9S)

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)	
				With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire
				(mm)	(mm)		(mm)	(mm)	(deg)	(kg)		(kg)
2-Stage Limited free lift	V300	3005	2025	155	155	6/10	2200	2200	2200	2200	3603	3736
	* V330	3305	2175	155	155	6/10	2200	2200	2150	2200	3625	3756
	V350	3505	2275	155	155	6/10	2200	2200	2080	2150	3640	3773
	V370	3705	2425	155	155	6/10	2190	2200	2070	2080	3653	3786
	V400	4005	2575	155	155	6/10	2140	2200	2020	2080	3692	3825
	V430	4305	2725	155	155	6/6	2080	2140	1960	2020	3744	3877
	V450	4505	2875	155	155	6/6	2050	2110	1930	1990	3766	3899
	V470	4705	2975	155	155	6/6	2010	2070	1890	1950	3780	3913
2-Stage full free lift	VF295	2976	2025	845	1377	6/6	2200	2200	2200	2080	3623	3761
	VF325	3276	2175	995	1527	6/6	2200	2200	2150	2080	3657	3795
	VF345	3476	2275	1095	1627	6/6	2200	2200	2080	2080	3680	3827
3-Stage full free lift	TF370/TS370	3705	1825	645	1177	6/6	2160	2200	2040	2080	3714	3852
	TF400/TS400	4005	1925	745	1277	6/6	2110	2160	1990	2040	3738	3876
	TF430/TS430	4305	2025	845	1377	6/6	2060	2110	1940	1990	3756	3894
	TF450/TS450	4505	2125	945	1477	6/6	2030	2080	1910	1960	3778	3916
	TF470/TS470	4705	2175	995	1527	6/6	1990	2050	1870	1930	3791	3929
	TF500/TS500	5005	2275	1095	1627	6/6	1940	2000	1820	1880	3813	3951
	TF550/TS550	5505	2475	1295	1827	6/6	1860	1920	1740	1800	3853	3990
	TF600/TS600	6005	2675	1495	2027	6/6	1380	1850	1260	1730	3917	4055
	TF650/TS650	6505	2875	1695	2227	3/3	1330	1820	1210	1700	3964	4102
TF700/TS700	7005	3075	1895	2427	3/3	1100	1750	980	1630	4002	4140	
4-Stage full free lift	QF610	6115	2160	980	1512	3/3	1500	1740	1380	1620	4159	4318
	QF660	6615	2360	1180	1712	3/3	1300	1660	1180	1540	4219	4377
	QF700	7015	2460	1280	1812	3/3	1000	1610	880	1490	4250	4408
	QF745	7465	2610	1430	1962	3/3	700	1550	580	1430	4295	4454
	QF790	7915	2760	1580	2112	3/3	500	1450	380	1330	4396	4554

Mast Specification (25D-9S)

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)	
				With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire
				(mm)	(mm)		(mm)	(mm)	(deg)	(kg)		(kg)
2-Stage Limited free lift	V300	3005	2025	155	155	6/10	2500	2500	2500	2500	3914	4046
	* V330	3305	2175	155	155	6/10	2500	2500	2500	2500	3935	4066
	V350	3505	2275	155	155	6/10	2500	2500	2500	2450	3950	4083
	V370	3705	2425	155	155	6/10	2500	2500	2460	2380	3962	4096
	V400	4005	2575	155	155	6/10	2500	2500	2380	2380	4002	4135
	V430	4305	2725	155	155	6/6	2480	2500	2360	2380	4054	4187
	V450	4505	2875	155	155	6/6	2430	2500	2310	2380	4076	4209
	V470	4705	2975	155	155	6/6	2390	2500	2270	2380	4091	4223
2-Stage full free lift	VF295	2976	2025	845	1377	6/6	2500	2500	2500	2380	3934	4071
	VF325	3276	2175	995	1527	6/6	2500	2500	2460	2380	3967	4105
	VF345	3476	2275	1095	1627	6/6	2500	2500	2380	2380	3991	4137
3-Stage full free lift	TF370/TS370	3705	1825	645	1177	6/6	2500	2500	2460	2380	4024	4162
	TF400/TS400	4005	1925	745	1277	6/6	2500	2500	2380	2380	4048	4186
	TF430/TS430	4305	2025	845	1377	6/6	2440	2500	2320	2380	4066	4204
	TF450/TS450	4505	2125	945	1477	6/6	2410	2500	2290	2380	4088	4226
	TF470/TS470	4705	2175	995	1527	6/6	2360	2450	2240	2330	4102	4239
	TF500/TS500	5005	2275	1095	1627	6/6	2310	2400	2190	2280	4124	4261
	TF550/TS550	5505	2475	1295	1827	6/6	1550	2310	1430	2190	4163	4300
	TF600/TS600	6005	2675	1495	2027	6/6	1050	2210	930	2090	4228	4365
	TF650/TS650	6505	2875	1695	2227	3/3	1000	2180	880	2060	4274	4412
TF700/TS700	7005	3075	1895	2427	3/3	830	2100	710	1980	4312	4450	
4-Stage full free lift	QF610	6115	2160	980	1512	3/3	1600	2120	1480	2000	4470	4628
	QF660	6615	2360	1180	1712	3/3	1400	2040	1280	1920	4530	4687
	QF700	7015	2460	1280	1812	3/3	1100	1980	980	1860	4560	4718
	QF745	7465	2610	1430	1962	3/3	800	1650	680	1530	4606	4764
	QF790	7915	2760	1580	2112	3/3	600	1250	480	1130	4706	4864

Mast Specification (30D-9S)

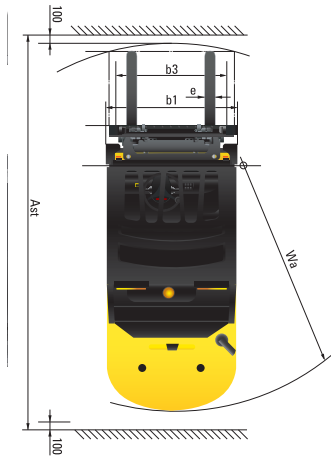
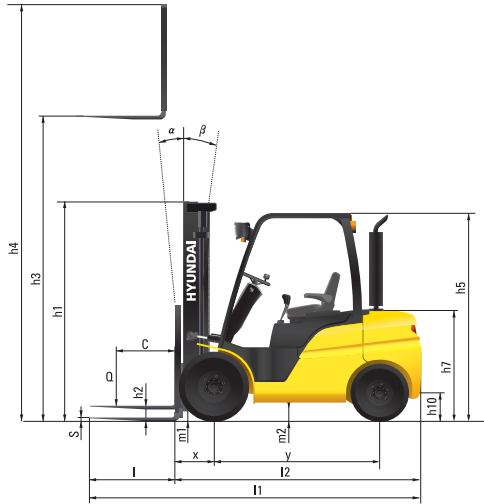
Mast Type		Maximum Fork Height	Overall Height (Lowered)	Free Lift Height		Tilt Angle Forward / Backward	Load Capacity without side shift at (600 mm LC)		Load Capacity with side shift at (600 mm LC)		Truck Weight (Unloaded)	
				With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire
				(mm)	(mm)		(mm)	(mm)	(deg)	(kg)		(kg)
2-Stage Limited free lift	V300	3005	2040	155	155	6/10	2980	2980	2980	2980	4310	4420
	* V330	3305	2190	155	155	6/10	2980	2980	2980	2980	4334	4440
	V350	3505	2290	155	155	6/10	2980	2980	2980	2980	4348	4458
	V370	3705	2440	155	155	6/10	2980	2980	2930	2980	4361	4471
	V400	4005	2590	155	155	6/10	2980	2980	2820	2980	4401	4512
	V430	4305	2740	155	155	6/6	2960	2980	2780	2950	4454	4564
	V450	4505	2890	155	155	6/6	2920	2980	2740	2825	4477	4587
	V470	4705	2990	155	155	6/6	2850	2930	2670	2755	4492	4602
2-Stage full free lift	VF295	2976	2040	860	1314	6/6	2980	2980	2980	2980	4375	4484
	VF325	3276	2190	1010	1464	6/6	2980	2980	2950	2980	4410	4519
	VF345	3476	2290	1110	1564	6/6	2980	2980	2820	2950	4445	4554
3-Stage full free lift	TF370/TS370	3705	1840	660	1114	6/6	2980	2980	2820	2980	4484	4593
	TF400/TS400	4005	1940	760	1214	6/6	2980	2980	2800	2950	4509	4617
	TF430/TS430	4305	2040	860	1314	6/6	2930	2980	2750	2825	4531	4639
	TF450/TS450	4505	2140	960	1414	6/6	2880	2940	2700	2765	4556	4665
	TF470/TS470	4705	2190	1010	1464	6/6	2850	2900	2670	2725	4570	4679
	TF500/TS500	5005	2290	1110	1564	6/6	2700	2840	2520	2665	4593	4701
	TF550/TS550	5505	2490	1310	1764	6/6	1750	2720	1570	2545	4637	4745
	TF600/TS600	6005	2690	1510	1964	6/6	1150	2630	970	2455	4707	4815
	TF650/TS650	6505	2890	1710	2164	3/3	1080	2590	900	2415	4758	4866
TF700/TS700	7005	3090	1910	2364	3/3	900	2500	720	2325	4801	4910	
4-Stage full free lift	QF610	6115	2175	995	1449	3/3	1700	2560	1520	2385	4894	5021
	QF660	6615	2375	1195	1649	3/3	1500	2460	1320	2285	4954	5081
	QF700	7015	2475	1295	1749	3/3	1200	2400	1020	2225	4984	5111
	QF745	7465	2625	1445	1899	3/3	900	2320	720	2145	5030	5157
	QF790	7915	2775	1595	2049	3/3	700	2230	520	2055	5130	5258

Mast Specification (33D-9S)

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)	
				With Load Backrest	Without Load Backrest		Single Tire	Double Tire	Single Tire	Double Tire	Single Tire	Double Tire
				(mm)	(mm)		(mm)	(mm)	(deg)	(kg)		(kg)
2-Stage Limited free lift	V300	3005	2110	155	155	6/10	3300	3300	3300	3300	4578	4694
	* V330	3305	2260	155	155	6/10	3300	3300	3300	3300	4604	4718
	V350	3505	2360	155	155	6/10	3300	3300	3300	3300	4617	4734
	V370	3705	2510	155	155	6/10	3300	3300	3210	3300	4632	4747
	V400	4005	2660	155	155	6/10	3300	3300	3120	3300	4673	4789
	V430	4305	2810	155	155	6/6	3250	3300	3070	3250	4727	4843
	V450	4505	2960	155	155	6/6	3190	3300	3010	3125	4750	4867
	V470	4705	3060	155	155	6/6	3140	3240	2960	3065	4766	4882
2-Stage full free lift	VF295	2976	2110	930	1384	6/6	3300	3300	3300	3300	4661	4774
	VF325	3276	2260	1080	1534	6/6	3300	3300	3210	3300	4697	4810
	VF345	3476	2260	1180	1634	6/6	3300	3300	3120	3250	4732	4844
3-Stage full free lift	TF370/TS370	3705	1910	730	1114	6/6	3300	3300	3120	3250	4804	4917
	TF400/TS400	4005	2010	830	1214	6/6	3250	3300	3070	3125	4826	4939
	TF430/TS430	4305	2110	930	1314	6/6	3180	3280	3000	3105	4847	4960
	TF450/TS450	4505	2210	1030	1414	6/6	3120	3220	2940	3045	4868	4982
	TF470/TS470	4705	2260	1080	1464	6/6	3080	3170	2900	2995	4882	4995
	TF500/TS500	5005	2360	1180	1564	6/6	3030	3110	2850	2935	4904	5017
	TF550/TS550	5505	2560	1380	1764	6/6	2200	2990	2020	2815	4948	5061
	TF600/TS600	6005	2760	1580	1964	6/6	1200	2870	1020	2695	5021	5134
	TF650/TS650	6505	2960	1780	2164	3/3	1050	2830	870	2655	5069	5182
TF700/TS700	7005	3160	1980	2364	3/3	700	2730	520	2555	5110	5223	
4-Stage full free lift	QF610	6115	2225	1045	1449	3/3	1800	2870	1620	2695	5147	5265
	QF660	6615	2425	1245	1649	3/3	1600	2770	1420	2595	5207	5325
	QF700	7015	2525	1345	1749	3/3	1300	2700	1120	2525	5237	5355
	QF745	7465	2675	1495	1899	3/3	1000	2620	820	2445	5280	5398
	QF790	7915	2825	1645	2049	3/3	800	2530	620	2355	5383	5502

New 9 Series

Dimensions

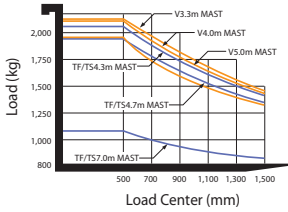


Specifications

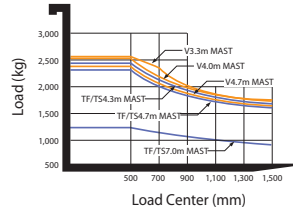
Identification						
1.1	Manufacturer	HYUNDAI				
1.2	Type	22D-95	25D-95	30D-95	33D-95	
1.3	Drive: Electric, Diesel, LPG Gas	DIESEL	DIESEL	DIESEL	DIESEL	
1.4	Type of operation: hand, pedestrian, standing, seated, order-picker	seated	seated	seated	seated	
1.5	Load capacity (standard)	Q (kg)	2200	2500	2980	3300
1.6	Load center distance	c (mm)	500	500	500	500
1.8	Load distance, center of drive axle to forks	x (mm)	468	468	468	468
1.9	Wheelbase	y (mm)	1650	1650	1700	1700
Weights						
2.1	Service weight	kg	3625	3935	4334	4604
2.2	Axle loading, loaded front / rear	kg	5132 / 693	5537 / 898	6316 / 998	6803 / 1101
2.3	Axle loading, unloaded front / rear	kg	1642 / 1984	1570 / 2365	1639 / 2695	1624 / 2980
Wheels, Chassis						
3.1	Tires : solid rubber (V), superelastic (SE), pneumatic (P), polyurethane (PE)		P, S, N	P, S, N	P, S, N	P, S, N
3.2	Tires size, front (Ø x width)		7.00 - 12 14PR	7.00 - 12 14PR	8.15 - 15 14PR	8.15 - 15 14PR
3.3	Tires size, rear (Ø x width)		6.50 - 10 14PR	6.50 - 10 14PR	6.50 - 10 14PR	6.50 - 10 14PR
3.5	Wheels, number front rear (x = driven wheels)		2 / 2	2 / 2	2 / 2	2 / 2
3.6	Track width, front	b10 (mm)	999	999	1005	1005
3.7	Track width, rear	b11 (mm)	980	980	980	980
Basic Dimensions						
4.1	Mast / fork carriage tilt forward / backward	degrees	6 / 10	6 / 10	6 / 10	6 / 10
4.2	Lowered mast height (standard)	h1 (mm)	2175	2175	2190	2260
4.3	Free lift	h2 (mm)	155	155	155	155
4.4	Lift height (standard)	h3 (mm)	3305	3305	3305	3305
4.5	Extended mast height (standard)	h4 (mm)	4485	4485	4485	4485
4.7	Overhead load guard (cab) height	h5 (mm)	2160	2160	2180	2180
4.8	Seat height / standing height	h7 (mm)	1140	1140	1165	1165
4.12	Coupling height	h10 (mm)	382	382	407	407
4.19	Overall length	l1 (mm)	3627	3657	3726	3782
4.20	Length to face of forks	l2 (mm)	2577	2607	2676	2732
4.21	Overall width	b1 (mm)	1200	1200	1230	1230
4.22	Fork dimensions (hook type) LxWxT	s / e / l (mm)	1050 x 100 x 45	1050 x 100 x 45	1050 x 122 x 45	1050 x 122 x 45
4.23	Fork carriage ISO 2328, class / type A,B		2A	2A	3A	3A
4.24	Fork carriage width	b3 (mm)	1102	1102	1102	1102
4.31	Ground clearance, loaded, under mast	m1 (mm)	130	130	145	145
4.32	Ground clearance, centre of wheelbase	m2 (mm)	177	177	184	184
4.33	Aisle width for pallets 1000 x 1200 crossways (L x W)	Ast (mm)	2405	2461	2520	2570
4.34	Aisle width for pallets 800 x 1200 lengthways (W x L)	Ast (mm)	4154	4210	4281	4331
4.35	Turning radius	Wa (mm)	2286	2342	2413	2463
Performance Data						
5.1	Travel speed, loaded / unloaded (1/2)	km/h	18.4	18.4	19.8	19.8
5.2	Lift speed, loaded / unloaded	mm/s	550 / 610	540 / 610	480 / 500	470 / 500
5.3	Lowering speed, loaded / unloaded	mm/s	500 / 450	500 / 450	500 / 450	500 / 450
5.5	Drawbar pull, loaded	kg	2773	2780	2526	2530
5.7	Gradient performance, loaded	%	47.2	42.0	32.4	29.9
5.10	Service brake		FOOT / WET	FOOT / WET	FOOT / WET	FOOT / WET
Engine						
6.1	Engine manufacturer / type		kubota v3600	kubota v3600	kubota v3600	kubota v3600
6.2	Engine power acc. To ISO 1585	kW/rpm	48.1 / 2300	48.1 / 2300	48.1 / 2300	48.1 / 2300
6.3	Maximum Torque	kg.f.m/rpm	22.5 / 1700	22.5 / 1700	22.5 / 1700	22.5 / 1700
6.4	No. of cylinder / cubic capacity	EA/cc	4 / 3620	4 / 3620	4 / 3620	4 / 3620
6.5		ℓ	61	61	61	61
Other Details						
8.2	Operating pressure (system/attachments)	kg.f/cm ²	200 / 165	200 / 165	200 / 165	200 / 165

Load Capacity

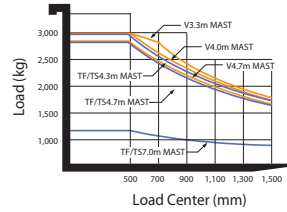
22D-9S



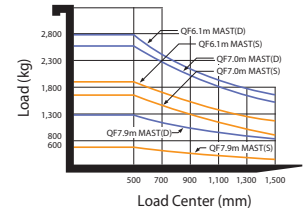
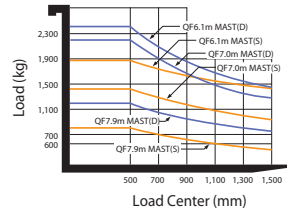
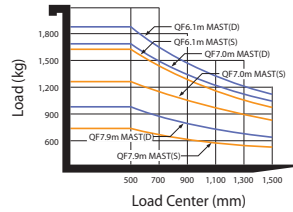
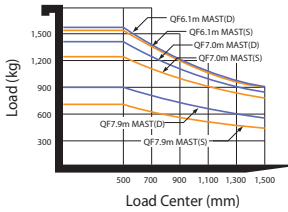
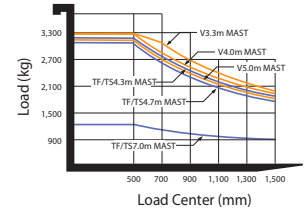
25D-9S



30D-9S



33D-9S



Optional Items

• Fork (mm)

22/25D-9S : 900, 1000, 1050 (standard), 1200, 1350, 1500, 1650, 1800

30/33D-9S : 900, 1050 (standard), 1150, 1200, 1650, 1800,

1970, 2120, 2300, 2400

• Overshoe (mm)

2/25D-9S : 1300, 1500, 1700, 1800

30/33D-9S : 1500, 1700, 1800

• Integral Sideshift

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

• Seat : KAB

• M.C.V : 3-Spool (standard), 4-Spool

• Load Indicator

• Fork Auto Leveling System

• Rear View Camera

• Cabin (Heater & Air Conditioner)

• Hydraulic Temperature / Pressure Monitor

• Battery Disconnect Switch (Master Switch)

- * 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

