

# 22/25/30/33D-9E

Diesel Counterbalance Trucks

MOVING YOU FURTHER

HYUNDAI HEAVY INDUSTRIES



■ Some of the photos may include optional equipment.

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 **HYUNDAI**  
HEAVY INDUSTRIES



# 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
- OPSS System for safe operation (Optional)
- Easy serviceability
- Password starting system
- Auto fork leveling system (Optional)
- Load weight indicator (Optional)



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# High Efficiency & Optimal Performance

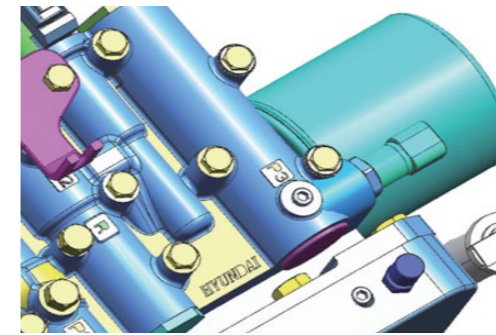


Powerful engine and high technology systems provide you with enhanced performance and highest productivity.

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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 (Optional)

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.



### Fully Hydrostatic Power Steering

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



## YANMAR 4TNE92 Engine

### 33.4kW/2,450rpm

#### High Power Engine - YANMAR 4TNE92

Market approved quality of YANMAR 4TNE92 engine ensures incomparable performance, durability and excellent fuel efficiency. This engine meets EU stage III A emission regulations.



#### Travel Speed (MAX)

Model	km / h
22D-9E	17.1
25D-9E	17.1
30D-9E	18.4
33D-9E	18.4

#### Gradeability (MAX)

Model	%
22D-9E	31.8
25D-9E	28.5
30D-9E	22.3
33D-9E	20.6

#### Faster Travel Speed & Gradeability

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



# Best Convenience & Optimized Ergonomics



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

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## Spacious Operator Cabin

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



### 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.



### Low Entrance Height

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



### 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.



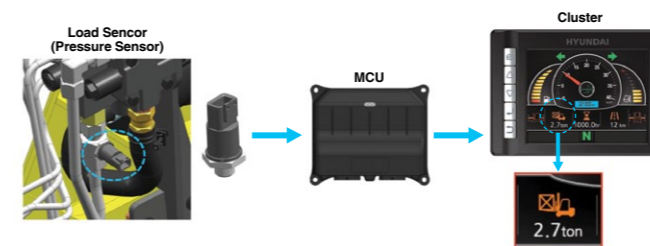
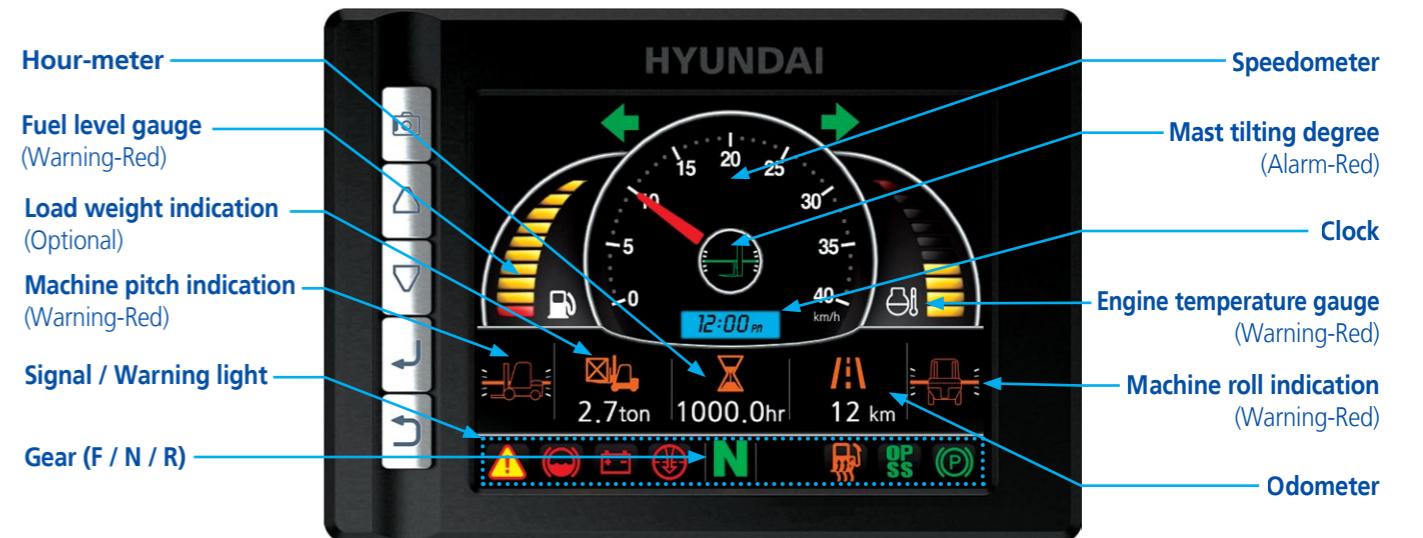
### Comfortable Grammer Seat

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)
- \*Movable Armrests

## 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, battery discharge indicator and hour meter.



### Load Indicator (Optional)

The optional load indicator displays the load weight on 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



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 operator with wider visibility. The panoramic mirror expands the driver's view when backing up.

\*Some of the photos may include optional equipment.



## Strong Overhead Guard

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



## Steel Side Cover (Optional)

The strengthened steel side cover provides enhanced durability.



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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)

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

- Lift Lock
- Tilt Lock
- Drive Lock
- Parking



## Safety Lamps & Rear Reflectors

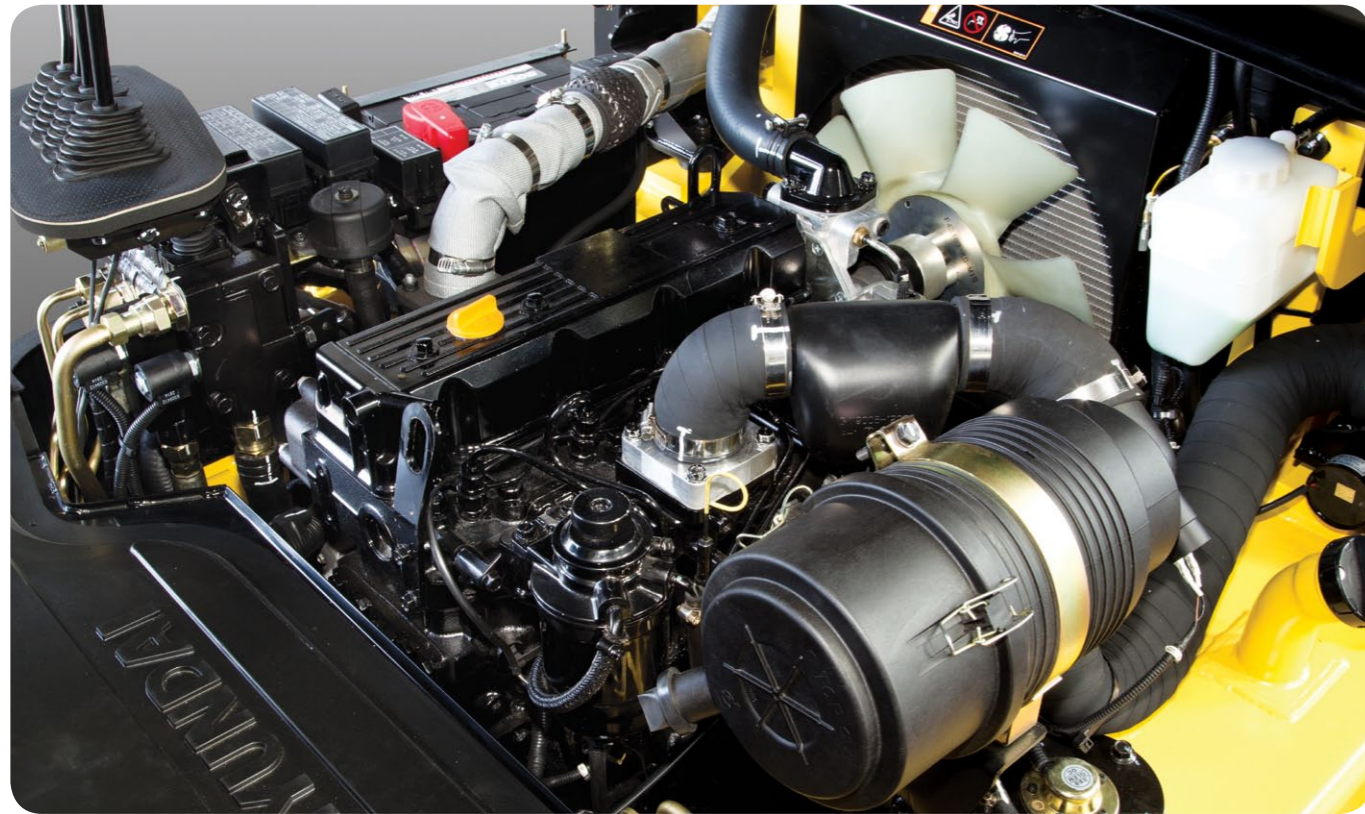
Halogen headlights and rear LED combination lights offer the driver visibility in all circumstances. Rear reflectors mounted on the counterweight enhance safety for the driver and the application.



# Fast and Easy Maintenance

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

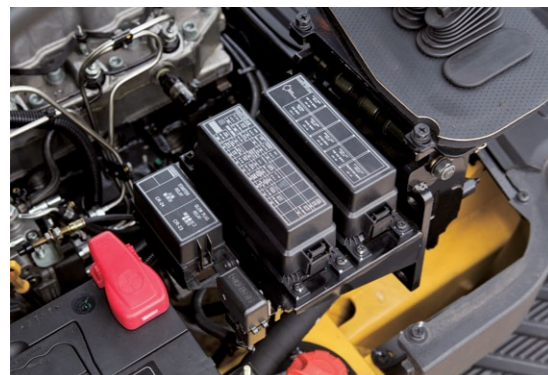
**22/25/30/33D-9E**



## Large Engine Hood

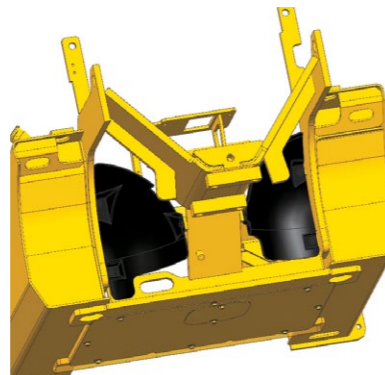
Highly accessible engine compartment assures fast and efficient maintenance. The enlarged air cleaner(8") has extended service time of engine.

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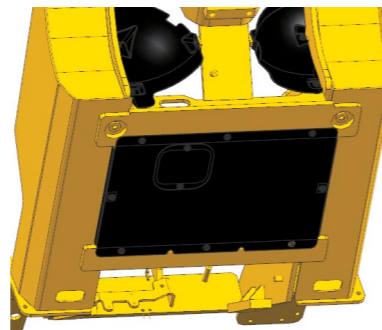
## Waterproof & Dustproof Cover

Newly developed Waterproof and Dustproof fuse box and relay box for ease of maintenance.



## Rear Tire Cover (Optional)

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



## Under Cover (Optional)

The Under cover protect the engine and components from dusts caused by ground. It helps to lengthen Components life.



Rear View Camera (Optional)



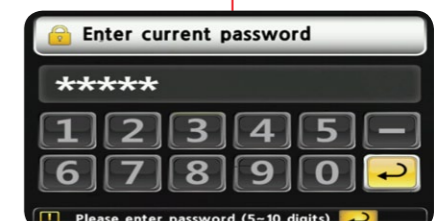
Parking Brake Switch  
With auto parking function when the operator is not in the seat

Emergency Switch (Optional)

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Maintenance Management			
Item	Interval	Elapse Count	Alarm
Axle Planetary Ge...	100	2	0
Transmission Oil	100	2	0
Transmission Oil F...	100	2	0
Hydraulic Tank Al...	250	2	0
Air Cleaner Comp...	450	2	0
Engine Oil Filter	500	2	0

Maintenance Management Display



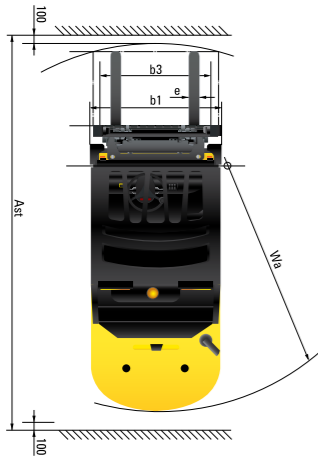
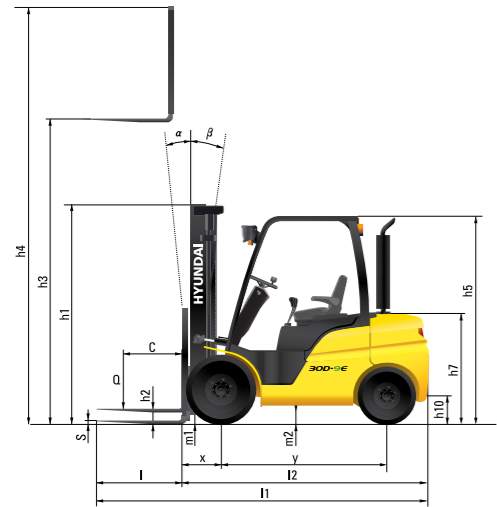
Password Starting System (Anti-theft system)





# New 9 Series

## Dimension

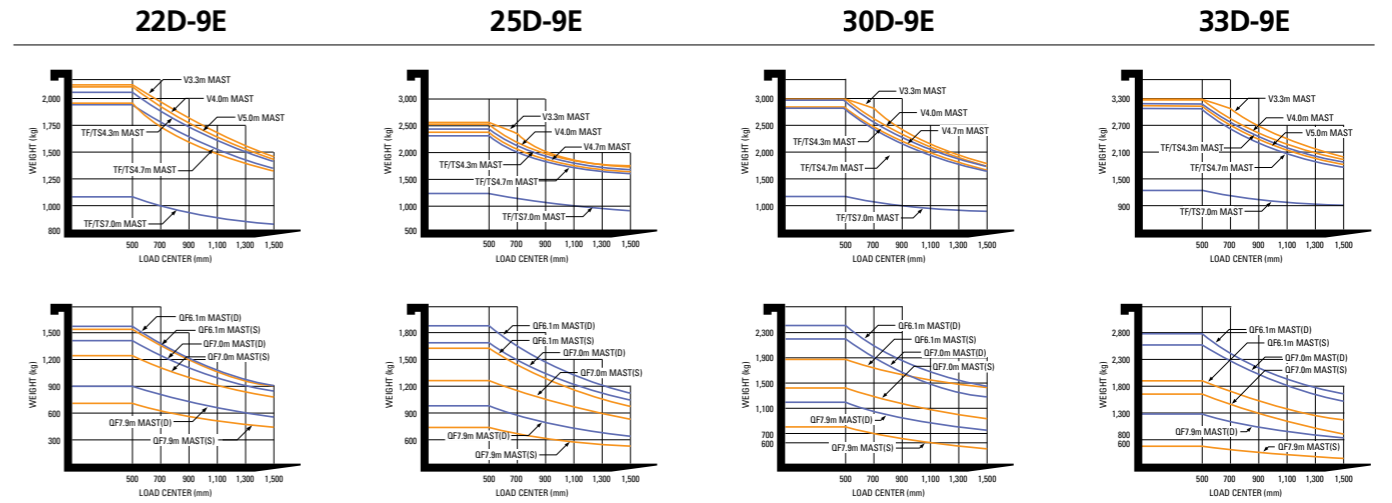


## Specification

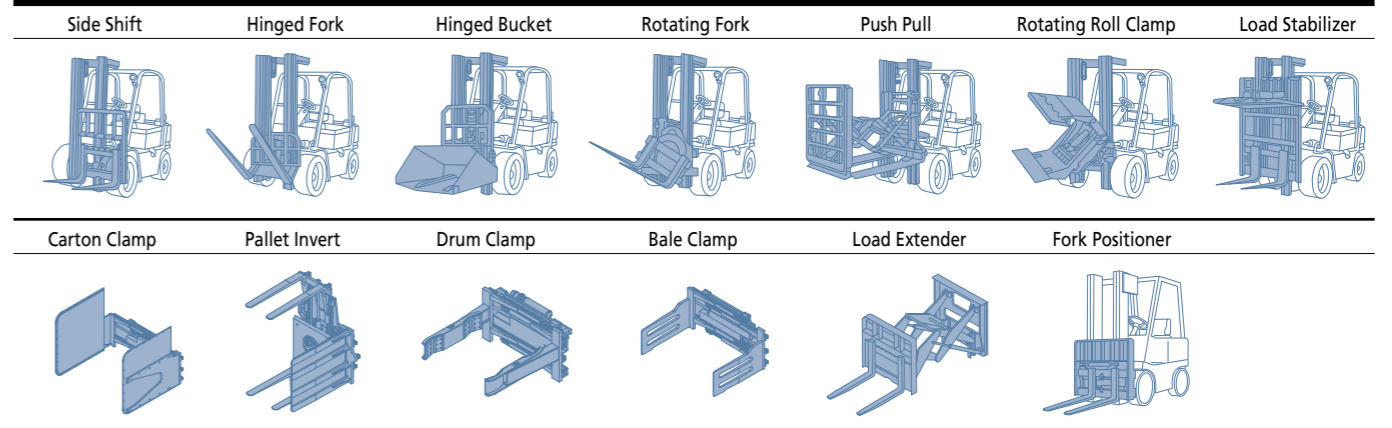
Identification						
1.1	Manufacturer	Hyundai	Hyundai	Hyundai	Hyundai	
1.2	Manufacturer's model designation	22D-9E	25D-9E	30D-9E	33D-9E	
1.3	Drive: electric (battery or mains),diesel,petrol,fuel gas>manual	DIESEL	DIESEL	DIESEL	DIESEL	
1.4	Type of operation:hand,pedestrian,standing,seated,order-picker	seated	seated	seated	seated	
1.5	Load capacity / Rated load	kg 2200	2500	3000	3300	
1.6	Load center distance	c mm	500	500	500	
1.8	Load distance, center of drive axle to fork	x mm	468	468	468	
1.9	Wheelbase	y mm	1650	1650	1700	
Weights						
2.1	Service weight	kg	3510	3825	4219	4500
2.2	Axle loading, loaded front / rear	kg	5143 / 567	5549 / 776	6355 / 863	6788 / 1012
2.3	Axle loading, unloaded front / rear	kg	1652 / 1858	1582 / 2243	1647 / 2572	1609 / 2891
Wheels, Chassis						
3.1	Tires ; Pneumatic(P), Solid(S), Non-marking(N)	P	P	P	P	
3.2	Tires size, front	7.00 - 12, 14PR	7.00 - 12, 14PR	28X9 - 15, 14PR	28X9 - 15, 14PR	
3.3	Tires size, rear	6.50 - 10, 14PR	6.50 - 10, 14PR	6.50 - 10, 14PR	6.50 - 10, 14PR	
3.4	Number of wheels front / rear (x=driven wheels)	2x / 2	2x / 2	2x / 2	2x / 2	
3.5	Track width, front	mm	999	999	1005	1005
3.6	Track width, rear	mm	980	980	980	980
Basic Dimensions						
4.1	Mast / fork carriage tilt forward / backward (α / β) degrees	6 / 10	6 / 10	6 / 10	6 / 10	
4.2	Lowered mast height	h1 (mm)	2175	2175	2190	2260
4.3	Free lift	h2 (mm)	155	155	155	155
4.4	Lift height	h3 (mm)	3305	3305	3305	3305
4.5	Extended mast height	h4 (mm)	4485	4485	4485	4485
4.7	Overhead guard height (cabin)	h5 (mm)	2160 (2170)	2160 (2170)	2180 (2190)	2180 (2190)
4.8	Seat height / standing height rel. to SIP	h7 (mm)	1187	1187	1212	1212
4.12	Coupling height	h10 (mm)	295	295	320	320
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	1228	1228
4.22	Fork dimensions(hook type)	l / e / s (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)	157	157	181	181
4.33	Aisle width for pallets 1,000x1,200 crossways (LxW)	Ast(mm)	3954	4010	4081	4131
4.34	Aisle width for pallets 800x1,200 lengthways (WxL)	Ast(mm)	4154	4210	4281	4331
4.35	Turning radius	Wa(mm)	2286	2342	2413	2463
4.36	Smallest pivot point distance	b13 (mm)	714	714	731	731
Performance Data						
5.1	Travel speed, unloaded	km/h	17.1	17.1	18.4	18.4
5.2	Lift speed, loaded/ unloaded	mm/s	530 / 590	520 / 590	440 / 490	430 / 490
5.3	Lowering speed, loaded/unloaded	mm/s	500 / 450	500 / 450	500 / 450	500 / 450
5.5	Drawbar pull, loaded	kg	1958	1959	1772	1772
5.7	Gradient performance, loaded	%	31.8	28.5	22.3	20.6
5.9	Acceleration time, loaded/ unloaded(10m)	sec	-	-	-	-
5.10	Service brake		FOOT	FOOT	FOOT	FOOT
Engine						
6.1	Engine manufacturer / type		Yanmar 4TNE92	Yanmar 4TNE92	Yanmar 4TNE92	Yanmar 4TNE92
6.2	Engine power acc. to ISO 1585	kW/rpm	33.4(45.4ps) / 2450	33.4(45.4ps) / 2450	33.4(45.4ps) / 2450	33.4(45.4ps) / 2450
6.3	Maximum Torque	kgf.m/rpm	14.7 / 1600	14.7 / 1600	14.7 / 1600	14.7 / 1600
6.4	No. of cylinder / cubic capacity	EA/cc	4 / 2659	4 / 2659	4 / 2659	4 / 2659
6.5	Fuel consumption acc. To VDI cycle	ℓ /h	3.1	3.2	3.4	3.6
Other Details						
8.1	Type of drive control		PowerShift	PowerShift	PowerShift	PowerShift
8.2	Operating pressure, system / attach	bar	182 / 162	182 / 162	196 / 162	196 / 162
8.3	Attach oil volume	ℓ /min	54	54	54	54
8.4	Sound pressure level (at driver's ear according to DIN 12053)	dB(A)	80	80	80	80
8.5	Trailer coupling, type DIN		PIN	PIN	PIN	PIN

# 22/25/30/33D-9E

## Load Capacity



## Various Attachments



## Optional Items

- **Fork(mm)**  
22/25D-9E : 900, 1000, 1050(STD), 1200, 1350, 1500, 1650, 1800, 2100  
30/33D-9E : 900, 1050(STD), 1150, 1200, 1350, 1500, 1650, 1800, 1970, 2120, 2300, 2400
- **Overshoe(mm)**  
22/25D-9E : 1300, 1500, 1700, 1800  
30/33D-9E : 1300, 1500, 1700, 1800
- **Integral Sideshift, Fork positioner, Sideshift**
- **Tire** : Pneumatic(STD)/ Solid(superelastic) / Non-marking / Front double tire
- **M.C.V** : 4-Spool, 3-Spool(STD), 2-Spool
- **Seat** : Armrest, Heat, Backrest Ext, Buckle SW
- **Load Indicator**

- **Auto Fork Leveling System**
- **Rear Tire & Under Cover**
- **Rear View Camera**
- **Cabin (Heater)**
- **Hydraulic Pump Temperature / Pressure Monitor**
- **Battery Disconnect Switch (Master Switch)**
- **Beacon Lamp LED (Amber, Red, Blue)**
- **Rear Work Lamp**
- **F-N-R & Horn Knob switch**
- **Rear Horn**
- **Fire Extinguisher**
- **Pre Cleaner**
- **Emergency Switch**
- **OPSS (Travel, Mast)**