

# 50/70D-9

Diesel Counterbalance Trucks

MOVING YOU FURTHER

HYUNDAI HEAVY INDUSTRIES



\*Some of the photos may include optional equipment.

 **HYUNDAI | FORKLIFT**  
**HEAVY INDUSTRIES**

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2015. 11 Rev. 0

 **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
- 4.3 inch LCD color cluster
- Truck inclination warning system
- OPSS System for safe operation
- Easy serviceability
- Max speed limit function
- Password starting system
- Weight indicator (Optional)
- FATC (Full Automatic Temperature Control) (Optional)



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# High Efficiency & Optimal Performance



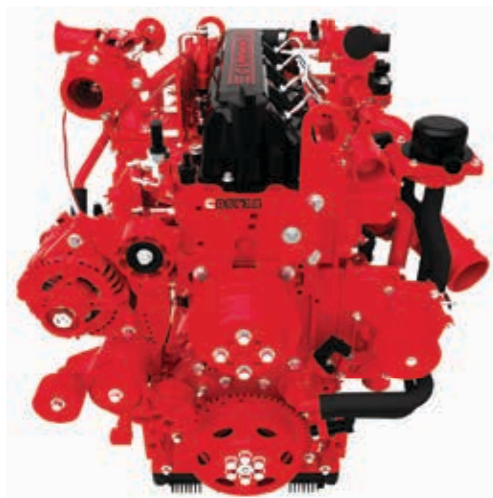
Powerful engine and high technology systems provide you with enhanced performance and highest productivity.

## 50/70D-9



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### CUMMINS QSF3.8 Engine 102PS/2,200rpm 42.3kgf · m/1,600rpm



#### Powerful Engine

The four cylinders turbo-charged engine is built for power, reliability and economy. This engine meets EPA Tier 4 and EU stage IV emission regulation.

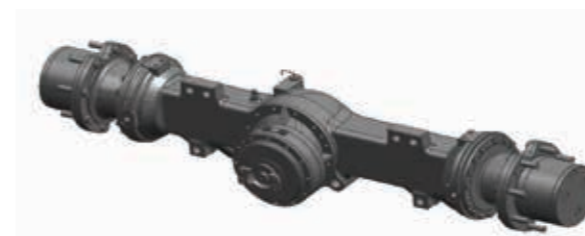
#### Excellent Fuel Efficiency

Fuel consumption rate is improved than previous model.

#### SCR(Selective Catalytic Reduction)

#### EGR(Exhaust Gas Recirculation)

- High torque at low speeds
- Excellent transient behavior



#### 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.



#### Negative Parking brake system

Multi wet discs type parking brake provides effective brake performance and easy operation by switch.



#### Highly Durable Transmission

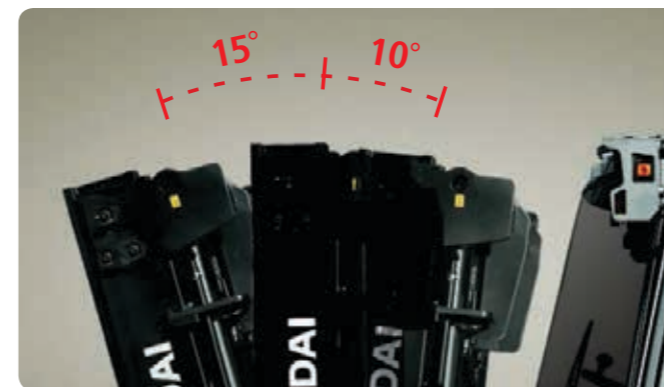
Powershift transmission of forward 2 stages and reverse 2 stages provides fast travel speed and quiet travel under any heavy load condition, and enhances work efficiency.

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



#### Fully hydrostatic power steering

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



#### Increased Mast Tilting Angle

The mast tilting angle of 15 degrees forward and 10 degrees backward, the operator can perform loading and unloading jobs safely and rapidly.



#### Travel Speed (MAX)

Model	km/h (mph)
50D-9	33.9 (21)
70D-9	33.6 (20.8)

#### Gradeability (MAX)

Model	%
50D-9	58.7
70D-9	44.4

#### Faster Travel Speed & Better Gradability

The powerful engine provides greater acceleration, better gradability and faster travel speed on any tough terrains or slopes.

# Best Convenience & Optimized Ergonomics



A design based on human engineering relieves fatigue and increases operator's efficiency.

**50/70D-9**



\*Some of the photo may include optional equipment.

## Spacious Operator Cabin

The newly designed cabin was conceived for more space, a wider field of view and operator comfort.



## Centralized Instrument Switch Panel



## Quick Response of Operating Control Levers

Only minimal operator's effort is required for precise, safe and productive control.  
(4 Lever : Standard), (2/3/5 Lever : Optional)



## Optimized Pedal Position



## Multi-Function Switch Lever



## Grammer Seat (STD)

An attractive and adjustable seat, based on a human engineering design, provides great comfort. And the angle of the armrest can be adjusted to reduce the fatigue of the driver.

- Applied the weight of the driver (45~170kg)
- ELR type seat belt standard
- Heater and Head Rest (Optional)



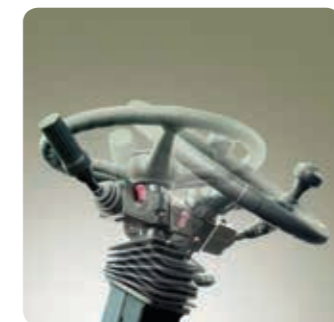
## New design and Concentrated Cluster Panel

1	Parking lamp	9	Hour meter	17	Rear wheel angle (optional)
2	Engine check warning lamp	10	Odometer	18	Right turn signal indicator lamp
3	High beam indicator lamp	11	Outside temperature indicator	19	Engine coolant temperature gauge
4	Operator presence indicator lamp	12	Air-con setting temp. indicator	20	Transmission oil temperature gauge
5	Seat belt warning lamp	13	Vehicle tilt angle indicator	21	Fuel gauge
6	Left turn signal indicator lamp	14	Clock	22	Speed gauge
7	Engine RPM indicator	15	T/M information display		
8	Weight indicator (optional)	16	Urea level gauge		



## Full Automatic Temperature Control

The system automatically controls the temperature of a cabin to maintain the optimal working environment.



## Adjustable Steering Wheel

Steering wheel with horn button can be adjusted by a lever on the right-hand side for the most comfortable operator position.

# Advanced Safety



Safety and durability are priorities in design of the equipment.

## 50/70D-9



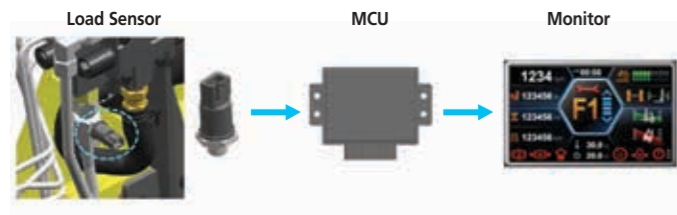
### Electrical Interlock

When parking brake engaged travel electric power intercepted. Even if when forward or reverse lever operated, vehicle can't be traveled.



### Adjustable Engine Low Idle RPM

While engine runs, low idle rpm can be increased by unit of 25rpm and it keeps previously set rpm when engine restarts.



### Weight 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.



### 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

\*Some of the photos may include optional equipment.



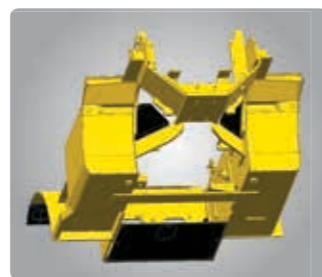
### Efficient Cooling System

Aluminum radiator provides excellent cooling capacity with improved air flow.



### Large Footboard & Hand Grip

Wide "open" step offers convenience and safety when entering and exiting truck.



### Rear Tire Cover/Under Cover (Optional)

The cover protect the engine and components from damage caused foreign substances.



### Easy and Safe Shift Lever

A single lever on the left side of the steering column gives the operator fast, easy control of direction. The lever must be in the neutral position before the engine can be started.



### Bright, Protected Headlights / Full lighting

In order to provide the driver exceptional visibility in all circumstances, work lamps are standard both to the front and to the back.



### Expansion Bellows

Sufficient length of bellows pipe between exhaust pipe and engine exhaust manifold certifies the durability of muffler and exhaust pipe.



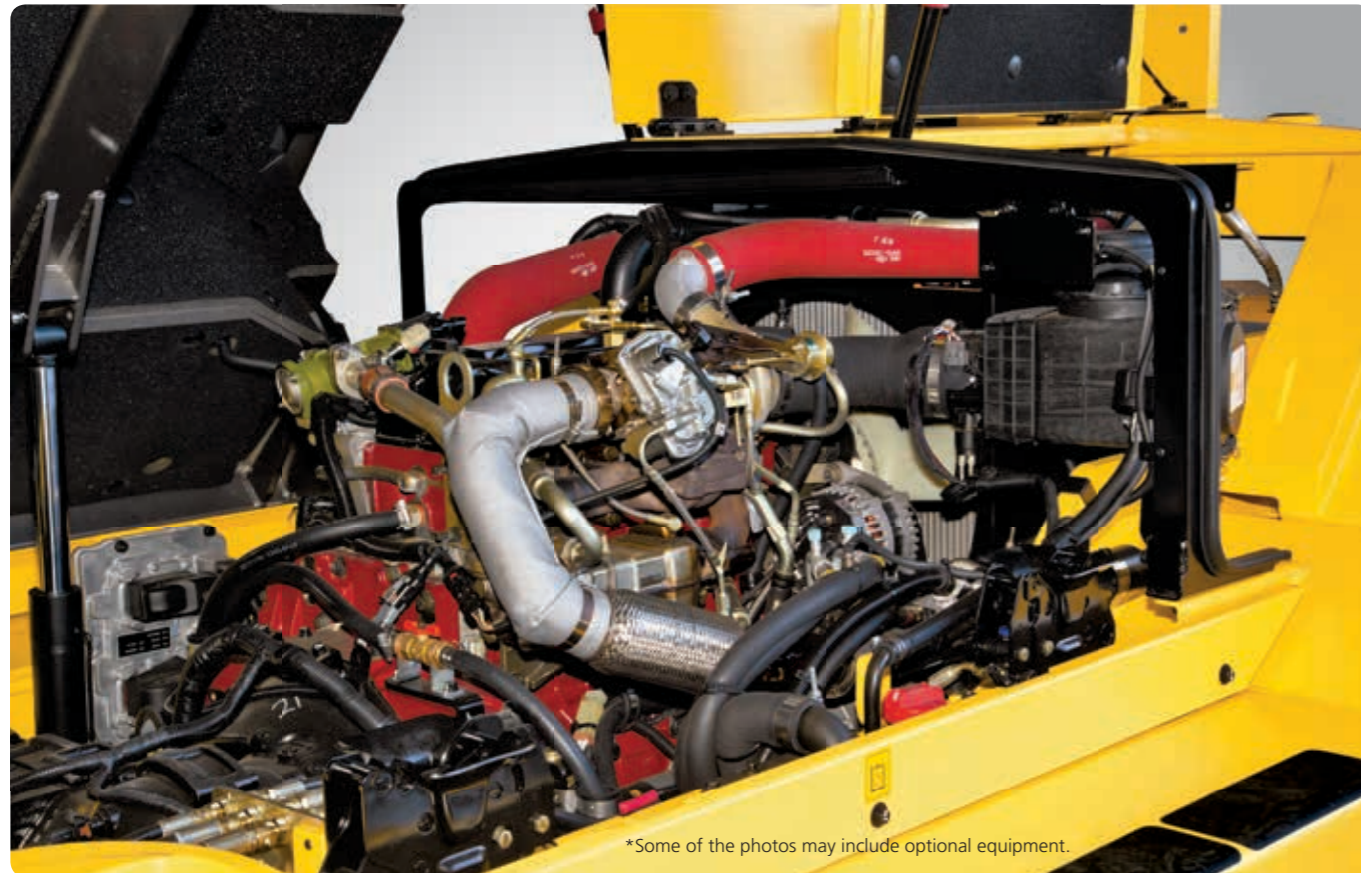
### Grease Fittings

Grease fittings are installed for fast access to steering axle center pin when doing your service checks.

# Fast and Easy Maintenance

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

## 50/70D-9



\*Some of the photos may include optional equipment.

### Enlarged Engine Hood Cover

Highly accessible engine compartment assures fast and efficient maintenance.



### Cab Tilt System

The cab tilt system makes servicing of all powertrain components quick and easy. An electrically assisted hydraulic actuated cylinder tilts operator cab to left side about 54 degrees for access to open truck components.



### Mechanic friendly Pre-Fuel Filter Replacement

Highly accessible engine compartment allows for quick replacement of filters.



### Electrically Monitored Air Filter Easy-to-Access

Air cleaner sensor alerts the operator of a clogged air filter and allows replacement before damage.



### Waterproof & Dustproof Cover

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



### Rear View Camera

The rear view camera makes the operation more easy and convenient.

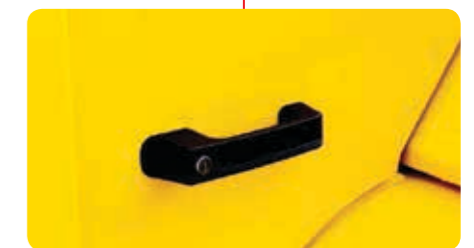
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### Easy-to-Access Washer Tank



### Maintenance Free Batteries



### Wing Cover Locking System

# New 9 Series

# 50/70D-9

## Mast Specification (50D-9) STD : Hook-On Type Fork & Carriage

Mast Type	Maximum Fork Height		Overall Height								Free Lift				Tilt Angle		Load Capacity w/o Side Shift At 24 in (600mm)LC		Load Capacity w/ Side Shift At 24 in (600mm)LC		Truck Weight Unloaded	
			Lowered		Extended				Without Load Backrest		With Std Load Backrest		Fwd	Bwd								
					W/o Load Backrest		W/Std Load Backrest															
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	lb	kg	lb	kg			
2- Stage Limited free lift	V270	107	2730	93	2365	145	3691	158	4020	6	140	6	140	15	10	11000	5000	11000	5000	19548	8865	
	*V300	119	3030	99	2515	157	3991	170	4320	6	140	6	140	15	10	11000	5000	11000	5000	19654	8913	
	V330	131	3330	105	2665	169	4291	182	4620	6	140	6	140	15	10	11000	5000	11000	5000	19760	8961	
	V350	139	3530	109	2765	177	4491	190	4820	6	140	6	140	15	10	11000	5000	11000	5000	19828	8992	
	V370	147	3730	113	2865	185	4691	198	5020	6	140	6	140	15	10	11000	5000	11000	5000	19899	9024	
	V400	159	4030	119	3015	196	4991	209	5320	6	140	6	140	15	10	11000	5000	11000	5000	20022	9080	
	V450	178	4530	131	3315	216	5491	229	5820	6	140	6	140	15	10	11000	5000	11000	5000	20525	9308	
	V500	198	5030	140	3565	236	5991	249	6320	6	140	6	140	15	10	11000	5000	11000	5000	20701	9388	
	V550	218	5530	150	3815	256	6491	269	6820	6	140	6	140	15	10	11000	5000	11000	5000	20875	9467	
	V600	237	6030	160	4065	275	6991	288	7320	6	140	6	140	15	10	11000	5000	11000	5000	21050	9546	
V700	277	7030	180	4565	315	7991	328	8320	6	140	6	140	15	6	11000	5000	10915	4950	21394	9702		
3- Stage full free lift	TF/TS450	180	4560	101	2565	218	5545	229	5805	62	1580	50	1275	15	10	11000	5000	11000	5000	21006	9526	
	TF/TS500	199	5060	227	2765	238	6045	248	6305	70	1780	58	1475	15	10	11000	5000	11000	5000	21208	9618	
	TF/TS560	220	5600	117	2965	259	6585	269	6845	78	1980	66	1675	15	10	11000	5000	10805	4900	21453	9729	
	TF/TS600	239	6060	125	3165	277	7045	288	7305	86	2180	74	1875	15	10	10805	4900	10584	4800	21647	9817	

## Mast Specification (50D-9) OPT : Shaft Type Fork & Carriage

Mast Type	Maximum Fork Height		Overall Height								Free Lift				Tilt Angle		Load Capacity w/o Side Shift At 24 in (600mm)LC		Load Capacity w/ Side Shift At 24 in (600mm)LC		Truck Weight Unloaded	
			Lowered		Extended				Without Load Backrest		With Std Load Backrest		Fwd	Bwd								
					W/o Load Backrest		W/Std Load Backrest															
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	lb	kg	lb	kg			
2- Stage Limited free lift	V270	107	2730	93	2365	-	-	156	3975	-	-	6	140	15	10	11000	5000	-	-	19497	8842	
	*V300	119	3030	99	2515	-	-	168	4275	-	-	6	140	15	10	11000	5000	-	-	19603	8890	
	V330	131	3330	105	2665	-	-	180	4575	-	-	6	140	15	10	11000	5000	-	-	19709	8938	
	V350	139	3530	109	2765	-	-	188	4775	-	-	6	140	15	10	11000	5000	-	-	19777	8969	
	V370	147	3730	113	2865	-	-	196	4975	-	-	6	140	15	10	11000	5000	-	-	19848	9001	
	V400	159	4030	119	3015	-	-	208	5275	-	-	6	140	15	10	11000	5000	-	-	19971	9057	
	V450	178	4530	131	3315	-	-	227	5775	-	-	6	140	15	10	11000	5000	-	-	20474	9285	
	V500	198	5030	140	3565	-	-	247	6275	-	-	6	140	15	10	11000	5000	-	-	20650	9365	
	V550	218	5530	150	3815	-	-	267	6775	-	-	6	140	15	10	11000	5000	-	-	20825	9444	
	V600	237	6030	160	4065	-	-	286	7275	-	-	6	140	15	10	11000	5000	-	-	20999	9523	
V700	277	7030	180	4565	-	-	328	8320	-	-	6	140	15	6	11000	5000	-	-	21343	9679		
3- Stage full free lift	TF/TS450	180	4560	101	2565	-	-	229	5805	-	-	52	1320	15	10	11000	5000	-	-	20853	9457	
	TF/TS500	199	5060	227	2765	-	-	248	6305	-	-	60	1520	15	10	11000	5000	-	-	21056	9549	
	TF/TS560	220	5600	117	2965	-	-	269	6845	-	-	68	1720	15	10	11000	5000	-	-	21301	9660	
	TF/TS600	239	6060	125	3165	-	-	288	7305	-	-	76	1920	15	10	10805	4900	-	-	21495	9748	

## Mast Specification (70D-9) STD : Hook-On Type Fork & Carriage

Mast Type	Maximum Fork Height		Overall Height								Free Lift				Tilt Angle		Load Capacity w/o Side Shift At 24 in (600mm)LC		Load Capacity w/ Side Shift At 24 in (600mm)LC		Truck Weight Unloaded	
			Lowered		Extended				Without Load Backrest		With Std Load Backrest		Fwd	Bwd								
					W/o Load Backrest		W/Std Load Backrest															
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	lb	kg	lb	kg			
2- Stage Limited free lift	V270	107	2730	93	2365	154	3911	158	4020	6	140	6	140	15	10	15500	7000	15500	7000	22798	10339	
	*V300	119	3030	99	2515	166	4211	170	4320	6	140	6	140	15	10	15500	7000	15500	7000	22902	10386	
	V330	131	3330	105	2665	178	4511	182	4620	6	140	6	140	15	10	15500	7000	15500	7000	23008	10434	
	V350	139	3530	109	2765	185	4711	190	4820	6	140	6	140	15	10	15500	7000	15500	7000	23078	10466	
	V370	147	3730	113	2865	193	4911	198	5020	6	140	6	140	15	10	15500	7000	15500	7000	23149	10498	
	V400	159	4030	119	3015	205	5211	209	5320	6	140	6	140	15	10	15500	7000	15500	7000	23272	10554	
	V450	178	4530	131	3315	225	5711	229	5820	6	140	6	140	15	10	15500	7000	15500	7000	23773	10781	
	V500	198	5030	140	3565	245	6211	249	6320	6	140	6	140	15	10	15500	7000	15500	7000	23949	10861	
	V550	218	5530	150	3815	264	6711	269	6820	6	140	6	140	15	10	15500	7000	15500	7000	24123	10940	
	V600	237	6030	160	4065	284	7211	288	7320	6	140	6	140	15	10	15500	7000	15500	7000	24298	11019	
V700	277	7030	180	4568	323	8211	328	8320	6	140	6	140	15	6	15500	7000	15500	6900	24644	11176		
3- Stage full free lift	TF/TS450	180	4560	101	2565	227	5765	229	5805	54	1360	50	1275	15	10	15500	7000	15500	7000	24368	11051	
	TF/TS500	199	5060	109	2765	247	6265	248	6305	61	1560	58	1475	15	10	15500	7000	15500	7000	24571	11143	
	TF/TS560	220	5600	117	2965	268	6805	269	6845	69	1760	66	1675	15	10	15500	7000	15215	6900	24816	11254	
	TF/TS600	239	6060	125	3165	286	7265	288	7305	77	1960	74	1875	15	10	14994	6800	14774	6700	25010	11342	

## Mast Specification (70D-9) OPT : Shaft Type Fork & Carriage

Mast Type	Maximum Fork Height		Overall Height								Free Lift				Tilt Angle		Load Capacity w/o Side Shift At 24 in (600mm)LC		Load Capacity w/ Side Shift At 24 in (600mm)LC		Truck Weight Unloaded	
			Lowered		Extended				Without Load Backrest		With Std Load Backrest		Fwd	Bwd								
					W/o Load Backrest		W/Std Load Backrest															
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	lb	kg	lb	kg			
2- Stage Limited free lift	V270	107	2730	93	2365	-	-	156	3975	-	-	6	140	15	10	15500	7000	-	-	22988	10425	
	*V300	119	3030	99	2515	-	-	168	4275	-	-	6	140	15	10	15500	7000	-	-	23096	10474	
	V330	131	3330	105	2665	-	-	180	4575	-	-	6	140	15	10	15500	7000	-	-	23200	10521	
	V350	139	3530	109	2765	-	-	188	4775	-	-	6	140	15	10	15500	7000	-	-	23268	10552	
	V370	147	3730	113	2865	-	-	196	4975	-	-	6	140	15	10	15500	7000	-	-	23338	10584	
	V400	159	4030	119	3015	-	-	208	5275	-	-	6	140	15	10	15500	7000	-	-	23462	10640	
	V450	178	4530																			

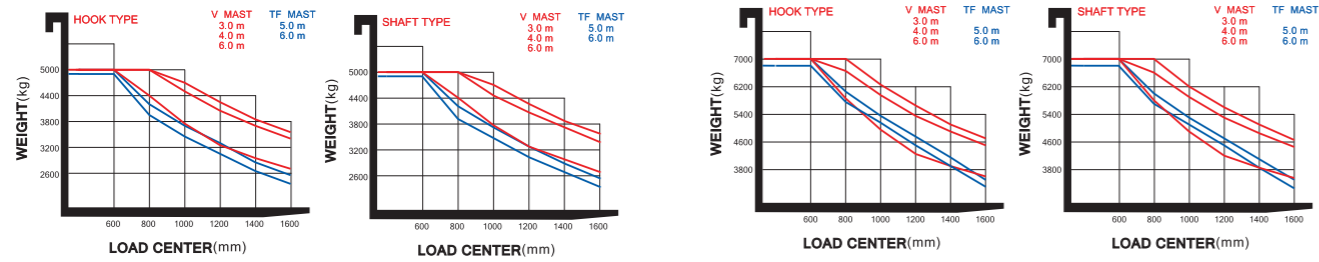
# New 9 Series

# 50/70D-9

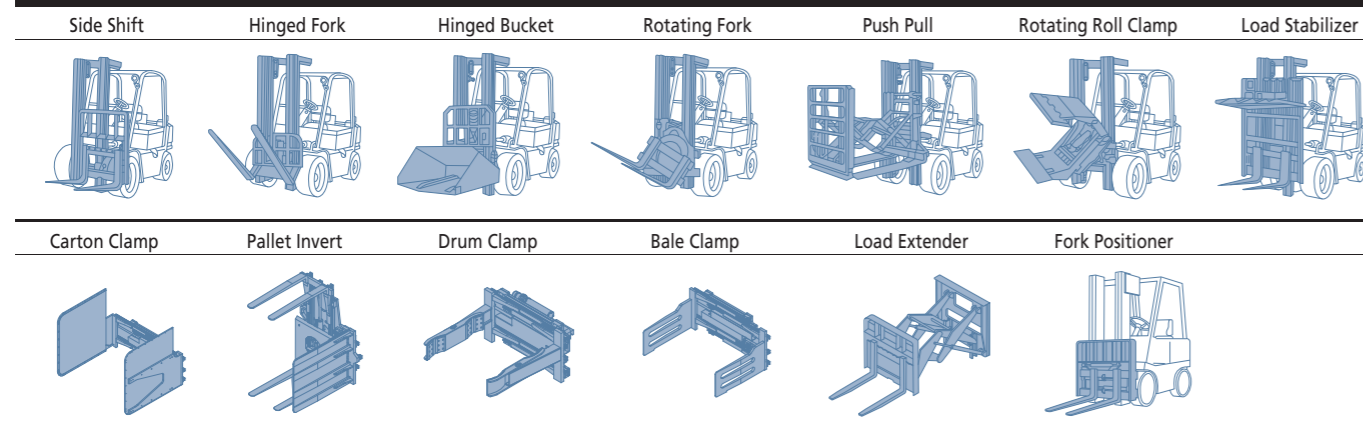
## Load Capacity

50D-9

70D-9



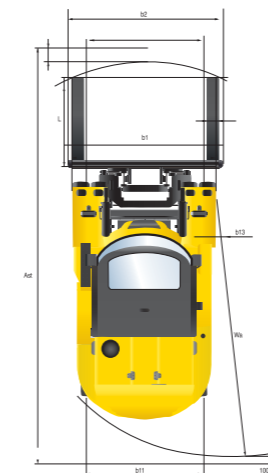
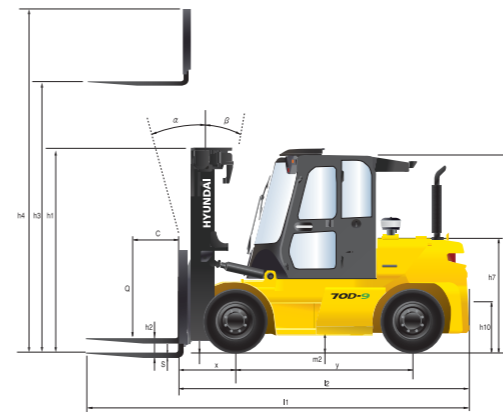
## Various Attachments



## Optional Items

- Fork(mm)  
50/70D-9 : 1200(STD), 1350, 1500, 1800, 2000, 2300, 2400
- Overshoe(mm)  
50D-9 : 1800, 2000, 2200, 2300  
70D-9 : 1800, 2000, 2200, 2300
- Integral Sideshift, Integral Fork Positioner, Sideshift
- Tire : Solid(superelastic) / Non-marking
- M.C.V : 2-Spool, 3-Spool, 5-Spool
- Seat : Armrest, Heat, Backrest Ext, Buckle SW
- Weight Indicator
- Rear View Camera
- Cabin (Heater & Air Conditioner)
- Battery Disconnect Switch (Master Switch)
- Beacon Lamp (LED) (Amber, Red, Blue)
- Rear Work Lamp
- Top Wiper

## Dimension



## Specification

Identification			
1.1	Manufacturer	Hyundai	Hyundai
1.2	Manufacturer's model designation	50D-9	70D-9
1.3	Drive: electric (battery or mains),diesel,petrol,fuel gas>manual	Diesel	Diesel
1.4	Type of operation:hand,pedestrian,standing,seated,order-picker	seated	seated
1.5	Load capacity / Rated load	kg 5,000	7,000
1.6	Load center distance	c mm 600	600
1.8	Load distance, center of drive axle to fork	x mm 610	610
1.9	Wheelbase	y mm 2,300	2,300
Weights			
2.1	Service weight	kg 8,890	10,474
2.2	Axle loading, loaded front / rear	kg 12,153 / 1,692	15,126 / 2,273
2.3	Axle loading, unloaded front / rear	kg 4,509 / 4,335	4,426 / 5,972
Wheels, Chassis			
3.1	Tires ; Pneumatic(P), Solid(S), Non-marking(N)	P	P
3.2	Tires size, front	8.25-15-14PR	8.25-15-14PR
3.3	Tires size, rear	8.25-15-14PR	8.25-15-14PR
3.4	Number of wheels front / rear (x=driven wheels)	4 x / 2	4 x / 2
3.5	Track width, front	mm 1,580	1,580
3.6	Track width, rear	mm 1,604	1,604
Basic Dimensions			
4.1	Mast / fork carriage tilt forward / backward ( $\alpha / \beta$ )	degrees 15 / 10	15 / 10
4.2	Lowered mast height	h1 (mm) 2,515	2,515
4.3	Free lift	h2 (mm) 140	140
4.4	Lift height	h3 (mm) 3,030	3,030
4.5	Extended mast height	h4 (mm) 4,275	4,275
4.7	Overhead guard height (cabin)	h6 (mm) 2,597	2,597
4.8	Seat height / standing height rel. to SIP	h7 (mm) 1,551	1,551
4.12	Coupling height	h10 (mm) 425	425
4.19	Overall length	l1 (mm) 4,716	4,866
4.20	Length to face of forks	l2 (mm) 3,516	3,666
4.21	Overall width	b1 (mm) 2,088	2,088
4.22	Fork dimensions(hook type)	s / e / l (mm) 60 x 150 x 1,200	65 x 150 x 1,200
4.23	Fork carriage ISO 2328, class / type A,B	Class IV	Class IV
4.24	Fork-carriage width	b3 (mm) 2,068	2,068
4.31	Ground clearance, loaded, under mast	m1(mm) 195	195
4.32	Ground clearance, centre of wheelbase	m2(mm) 199	191
4.33	Aisle width for pallets 1,000x1,200 crossways (LxW)	Ast(mm) 5,129	5,251
4.34	Aisle width for pallets 800x1,200 lengthways (WxL)	Ast(mm) 5,329	5,451
4.35	Turning radius	Wa(mm) 3,314	3,436
4.36	Smallest pivot point distance	b13 (mm) 1,224	1,224
Performance Data			
5.1	Travel speed, unloaded	km/h 33.9	33.6
5.2	Lift speed, loaded/ unloaded	mm/s 440 / 460	420 / 460
5.3	Lowering speed, loaded/unloaded	mm/s 500 / 450	500 / 450
5.5	Drawbar pull, loaded	kg 7,591	7,664
5.7	Gradient performance, loaded	% 58.7	44.4
5.9	Acceleration time, loaded/ unloaded(10m)	sec -	-
5.10	Service brake	FOOT(Hydraulic)	FOOT(Hydraulic)
Engine			
6.1	Engine manufacturer / type	CUMMINS / QSF3.8	CUMMINS / QSF3.8
6.2	Engine power acc. to ISO 1585	kW(ps)/rpm 75(102) / 2,200	75(102) / 2,200
6.3	Maximum Torque	kgf.m/rpm 42.3 / 1,600	42.3 / 1,600
6.4	No. of cylinder / Displacement	EA/cc 4 / 3,800	4 / 3,800
6.5	Fuel consumption acc. To VDI cycle	ℓ /h 8.1	8.3
Other Details			
8.1	Type of drive control	Full Auto	Full Auto
8.2	Operating pressure, system / attach	bar 185 / 150	185 / 150
8.3	Oil volume (hydraulic)	ℓ 132	132
8.4	Sound pressure level (at driver's ear according to DIN 12053)	dB(A) 79.8	79.8
8.5	Trailer coupling, type DIN	Pin	Pin