

We build a better future



■ Photo may include optional equipment

HYUNDAI DIESEL FORKLIFT TRUCKS - Stage IIIB emissionised engine

# 110/130/160D-7A

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**EUROTRADING MORTIER**

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# NEW Diesel Engine Forklift Trucks

## Your satisfaction is our Priority

### 110/130/160D-7A

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## Full Equipment



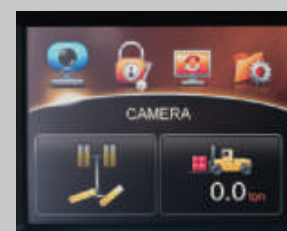
Instrument Switch Panel



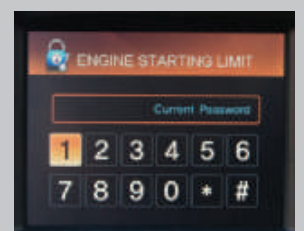
Air Conditioner & Heater



Rear View Camera



Wheel Angle Sensing  
& Load Indicator (Option)



ESL (Engine Start Limit)

# The new Job site master

The efficient and ergonomically designed 110D-7A/130D-7A/160D-7A are made to fit you needs.

## Powerful Engine

### Cummins QSB6.7 Engine

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

#### Variable Geometry Turbo

Unique sliding nozzle design controls EGR flow and boosts response at all engine speeds.

#### New CM2250 (ECU)

3 x faster processing power  
2 x increased memory capability  
Increases HPCR capability and provides a seamless interface to equipment systems.

#### Clean Crankcase Filter

Removes crankcase emissions and eliminates oil drips or mist for ultra-clean engine operation.

#### High Efficiency Combustion

Removes high value of PM at source – less for catalyst to remove. Incorporates a proven cooled EGR system enabling up to 5% improved fuel efficiency.



**123 KW / 2200 rpm**

**74.6 kgf.m / 1500 rpm**



#### Engine control mode

Depending on the required power the driver has the choice between :

**Standard mode:** Optimised fuel consumption when working in a light or medium application;

**Power mode:** In a heavy application extra power is available.



#### Adjustable engine idling RPM

With the engine running the driver can change the idle RPM in steps of 25 RPM.



#### Electronic Full-automatic Transmission

The high quality ZF transmission has proven it's durability and ease of use together with soft and smooth gear changes.

#### Self Diagnosis Function Error indication on display



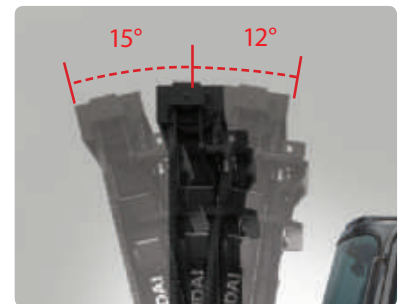
#### Transmission control switch

The operator has the choice between shifting manually or in the automatic modes choose between a two or a three step transmission.



#### Full lighting

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



#### Increased mast tilting angle

Maximum mast tilting angles of maximum 15° forward and 12° backwards are possible.



**High Power**  
**Low Noise**

■ Photo may include optional equipment



**Faster travel speed & better gradability**

The powerful engine combines fast acceleration with high travel speed and excellent gradability.

**Gradability  
(Loaded)**

110D-7A : 38.2 % (20.9°)  
130D-7A : 34.6 % (19.1°)  
160D-7A : 33.7 % (18.6°)

**Travel speed  
(Unloaded)**

110D-7A : 34.7 km/h  
130D-7A : 34.5 km/h  
160D-7A : 29.1 km/h

# Comfortable operation!

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



Wide visibility with Round Front Glass

Operator friendly gauges and water-resistant monitor panel



High-capacity air conditioner & heater

An integrated air conditioner and heater saves space inside the cabin. With its high capacity, the operator is, both in summer and winter, able to create a pleasant operating environment.



Heated air suspended seat with head rest (Option)

A seat designed to work a full shift in all comfort and with maximum ergonomoy.



**Rear view camera**

The rear view camera makes the operation more easy and convenient. And it supports 4 camera channels.



**Wheel Angle Sensing (Option)**

Real-time steering wheel angle is displayed on the monitor.



**Load Indicator (Option)**

The weight of the load is displayed on the screen. The driver is alerted when he is overloading the machine.



**Centralized Instrument switch Panel**



**USB MP3 Player & Remote Control**



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**Hands free Bluetooth system**



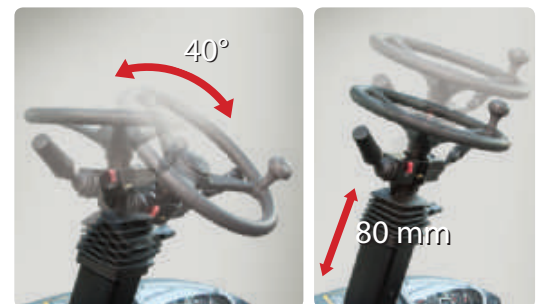
**Quick response of hydraulic levers**

Only minimal operator's effort is required for precise, safe and productive control.  
(4-Levers : standard)



**Ergonomical positioned pedals**

Based on human engineering, the accelerator, brake and inching pedals are optimally positioned.



**Adjustable steering column**

# Safety through high durability!

Safety and durability are priorities in design of our equipment.



## Efficient cooling system

A hydraulic fan motor ensures that the fan speed is always optimised depending on the temperatures of the intake air, transmission oil, hydraulic oil and engine coolant. This reduces both noise production and energy consumption.



## OPSS

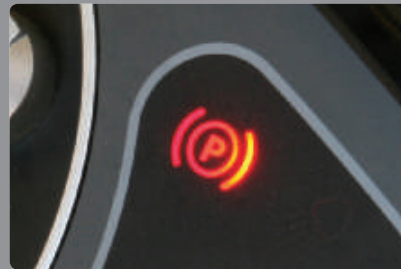
### (Operator Presence Sensing System)

When the driver is not in the seat, no driving or mast movement is possible.



## Kessler drive axle

The Kessler drive axle delivers the desired torque to the wheels and ensures smooth driving.



## Auto parking

The parking brake will automatically be engaged when the driver leaves the machine with the transmission in neutral.



## Wet disc brake system

Wet disc brakes improve the brake performance and make your service intervals longer. Enclosed brakes are protected against dust and water.



## Protector for hub bolts

By applying protector for preventing bolts breakage durability has been improved. (Same size of front and rear wheels)



## Cylinder guard

This guard helps to prevent possible damage on the cylinder rod from any foreign material.



## Grease fittings

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





■ Photo may include optional equipment



**Durable mast & carriage side rollers**

The durability of mast and carriage is increased with the use of side rollers.



**Reliable fork carriage**

High tensile structural steel is used to strengthen the fork carriage. To insure safety the width of the fork carriage is smaller than the overall width of the machine.



**Large footboard & handle**

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

# Centralized design for easy service!

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



## Large engine hood

Highly accessible engine compartment assures fast and efficient maintenance.



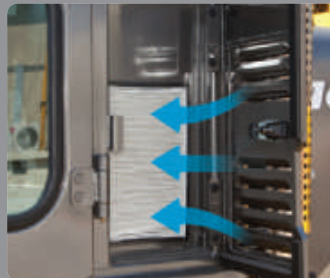
## Cabin Tilting automatic system

Cabin tilting electronic system makes servicing of all power train components quick and easy. An electrically assisted hydraulic actuated cylinder tilts operator cabin to left side about 65 degrees for easy access to inside of truck components.



## Easy change of air cleaner

This air filter is readily accessible for cleaning or replacement.



## Cabin air fresh filter

The pressure inside the cabin is slightly higher than outside. This excludes dust from the cabin and reduces noise levels.



## Compact fuse box for easy inspection



## Mechanic Friendly Fuel Filter Replacement

Highly accessible engine compartment allows for quick replacement of filters.



## Electrically monitored air filter

To avoid any damage, a sensor alerts the driver when the air filter is clogged.



## Automatic locking gas spring

Engine compartment hood is safely kept open by a self locking gas spring.



■ Photo may include optional equipment



**Master switch**

The master switch will protect the battery from electrical drainage.



**Large tool box**



**Pressure gauge port**



**Easy engine oil check**

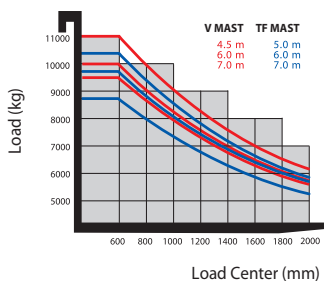
## Mast specifications

Mast Type		Maximum Fork Height (mm)	Overall Height (Lowered) (mm)	Free Lift Height (mm)	Tilt Angle Forward / Backward (deg)	Load Capacity (600 mm LC) (kg)		Truck Weight (Unloaded) (kg)	
						110D-7A	130D-7A	110D-7A	130D-7A
2- Stage Limited free lift	V280	2,900	2,805	0	15 / 12	11,000	13,000	15,595	16,350
	* V300	3,000	3,005	0	15 / 12	11,000	13,000	15,628	16,383
	V330	3,150	3,305	0	15 / 12	11,000	13,000	15,704	16,459
	V350	3,250	3,505	0	15 / 12	11,000	13,000	15,754	16,509
	V400	3,550	4,005	0	15 / 12	11,000	13,000	16,006	16,761
	V450	3,800	4,505	0	15 / 12	11,000	12,600	16,131	16,886
	V500	4,100	5,005	0	15 / 12	11,000	12,200	16,281	17,036
	V550	4,350	5,505	0	15 / 12	11,000	11,800	16,511	17,266
	V600	4,650	6,005	0	15 / 12	10,600	11,400	16,663	17,418
	V650	4,900	6,505	0	15 / 12	10,300	11,100	16,796	17,551
3- Stage full free lift	TF440	2,950	4,405	1,595	10 / 10	11,000	12,300	16,682	17,449
	TF470	3,050	4,750	1,695	10 / 10	11,000	12,100	16,752	17,519
	TF500	3,150	5,005	1,795	10 / 10	11,000	11,800	16,823	17,590
	TF550	3,317	5,505	1,962	10 / 10	10,600	11,500	16,991	17,758
	TF600	3,484	6,005	2,129	10 / 10	10,300	11,100	17,109	17,876
	TF650	3,651	6,505	2,296	10 / 10	10,000	10,800	17,323	18,090
	TF700	3,818	7,005	2,463	10 / 10	9,700	10,500	17,442	18,209

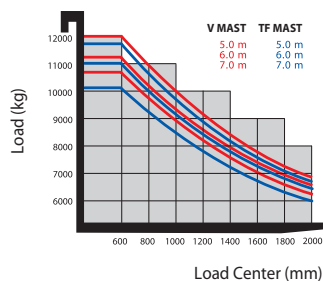
Mast Type		Maximum Fork Height (mm)	Overall Height (Lowered) (mm)	Free Lift Height (mm)	Tilt Angle Forward / Backward (deg)	Load Capacity (600 mm LC) (kg)		Truck Weight (Unloaded) (kg)	
						160D-7A		160D-7A	
2- Stage Limited free lift	V280	2,950	2,950	0	15 / 12	16,000		19,173	
	* V300	3,250	3,010	0	15 / 12	16,000		19,337	
	V330	3,400	3,310	0	15 / 12	16,000		19,431	
	V350	3,500	3,510	0	15 / 12	16,000		19,476	
	V400	3,750	4,010	0	15 / 12	16,000		19,764	
	V450	4,000	4,510	0	15 / 12	15,900		19,918	
	V500	4,300	5,010	0	15 / 12	15,900		20,100	
	V550	4,550	5,510	0	15 / 12	15,200		20,369	
	V600	4,850	6,010	0	15 / 12	14,600		20,551	
	V650	5,125	6,510	0	15 / 12	14,200		20,717	
2- Stage full free lift	V700	5,375	7,010	0	15 / 12	13,800		20,868	
	VS300	3,200	3,010	1,550	10 / 10	16,000		19,323	
	VS330	3,350	3,310	1,700	10 / 10	16,000		19,416	
	VS350	3,450	3,510	1,800	10 / 10	16,000		19,479	
	VS400	3,700	4,010	2,050	10 / 10	16,000		19,637	
	VS450	3,950	4,510	2,300	10 / 10	15,800		19,887	
	VS500	4,250	5,010	2,550	10 / 10	15,400		20,119	
	VS550	4,500	5,510	2,800	10 / 10	15,100		20,307	
3- Stage full free lift	VS600	4,800	6,010	3,050	10 / 10	14,600		20,600	
	TF395	2,950	3,964	1,600	10 / 10	15,600		20,450	
	TF450	3,130	4,504	1,790	10 / 10	15,300		20,611	
	TF500	3,279	5,004	1,957	10 / 10	14,900		20,786	
	TF550	3,464	5,504	2,124	10 / 10	14,500		20,969	
	TF600	3,631	6,004	2,291	10 / 10	14,100		21,125	
TF650	3,798	6,504	2,458	10 / 10	13,700		21,403		
TF700	3,965	7,004	2,625	10 / 10	13,400		21,546		

## Load Capacity

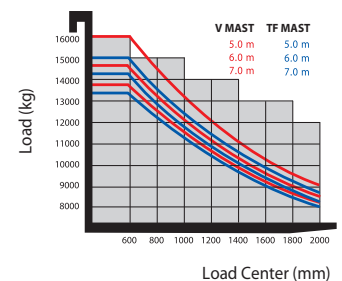
110D-7A



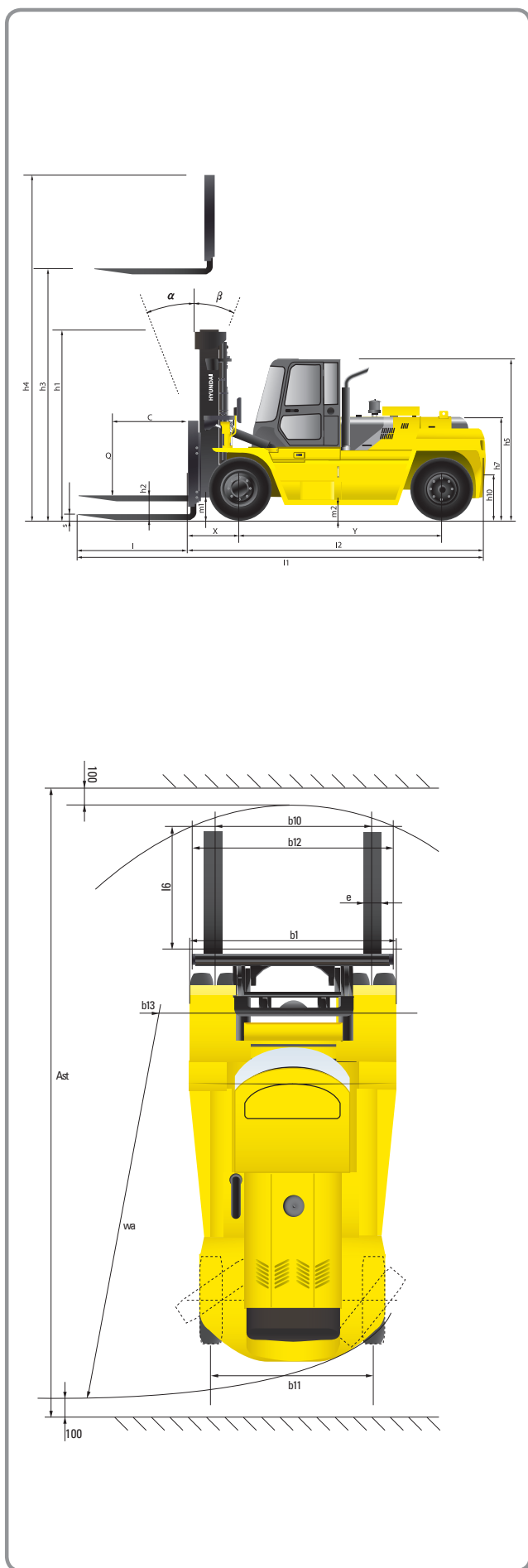
130D-7A



160D-7A



## Dimensions



## Specifications

Identification					
1.1	Manufacturer		Hyundai		
1.2	Type		110D-7A	130D-7A	160D-7A
1.3	Drive: Electric, Diesel, LPG Gas		DIESEL	DIESEL	DIESEL
1.4	Type of operation: hand, pedestrian, standing, seated, order-picker		seated	seated	seated
1.5	Load capacity (standard)	Q (t)	11.0	13.0	16.0
1.6	Load center distance	c (mm)	600	600	600
1.8	Load distance, center of drive axle to forks	x (mm)	760	770	815
1.9	Wheelbase	y (mm)	2,900	2,900	3,300
Weights					
2.1	Service weight	kg	15,628	16,383	19,337
2.2	Axle loading, loaded front / rear	kg	23,711 / 2,917	26,845 / 2,538	32,115 / 3,222
2.3	Axle loading, unloaded front / rear	kg	7,552 / 8,076	7,703 / 8,680	9,255 / 10,082
Wheels, chassis					
3.1	Tires : solid rubber (V), superelastic (SE), pneumatic (P), polyurethane (PE)		Pneumatic	Pneumatic	Pneumatic
3.2	Tires size, front (Ø x width)		10.00 - 20	10.00 - 20	12.00 - 20
3.3	Tires size, rear (Ø x width)		10.00 - 20	10.00 - 20	12.00 - 20
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	Mast / fork carriage tilt forward / backward	degrees	15 / 12	15 / 12	15 / 12
4.2	Lowered mast height (standard)	h1 (mm)	3,000	3,000	3,250
4.3	Free lift	h2 (mm)	0	0	0
4.4	Lift height (standard)	h3 (mm)	3,000	3,000	3,000
4.5	Extended mast height (standard)	h4 (mm)	4,465	4,465	4,710
4.7	Overhead load guard (cab) height	h5 (mm)	2,900	2,900	2,935
4.8	Seat height / standing height	h7 (mm)	1,723 / 1,884	1,723 / 1,884	1,749 / 1,954
4.12	Coupling height	h10 (mm)	600	600	600
4.20	Overall length	l1 (mm)	5,690	5,695	6,255
4.20	Length to face of forks	l2 (mm)	4,340	4,345	4,905
4.21	Overall width	b1 (mm)	2,450	2,450	2,497
4.22	Fork dimensions (hook type) LxWxT	s / e / l (mm)	75 x 200 x 1,350	85 x 200 x 1,350	90 x 200 x 1,350
4.23	Fork carriage ISO 2328, class / type A,B		Pin Mount	Pin Mount	Pin Mount
4.24	Fork carriage width	b3 (mm)	2,362	2,362	2,488
4.31	Ground clearance, loaded, under mast	m1 (mm)	270	270	270
4.32	Ground clearance, centre of wheelbase	m2 (mm)	330	330	330
4.33	Aisle width for pallets 1000 x 1200 crossways (L x W)	Ast (mm)	6,465	6,470	7,071
4.34	Aisle width for pallets 800 x 1200 lengthways (W x L)	Ast (mm)	6,465	6,470	7,071
4.35	Turning radius	Wa (mm)	4,160	4,160	4,706
4.36	Internal turning radius	b13 (mm)	1,516	1,516	1,748
Performance data					
5.1	Travel speed, unloaded	km/h	34.7	34.5	29.1
5.2	Lift speed, loaded / unloaded	m/s	0.44 / 0.51	0.43 / 0.51	0.35 / 0.45
5.3	Lowering speed, loaded / unloaded	m/s	0.51 / 0.46	0.51 / 0.46	0.43 / 0.39
5.6	Drawbar pull, loaded	N	102,264	103,441	121,446
5.8	Gradient performance, loaded / unloaded	%	38.2	34.6	33.7
5.10	Service brake		Hydraulic	Hydraulic	Hydraulic
Engine					
6.1	Engine manufacturer / type		Cummins QSB6.7	Cummins QSB6.7	Cummins QSB6.7
6.2	Engine power acc. to ISO 1585	kW	123	123	123
6.4	Rated speed	1/min	2,200	2,200	2,200
6.5	No. of cylinder / cubic capacity	/cm³	6 / 6,700	6 / 6,700	6 / 6,700
Other details					
8.1	Type of drive control		Torque Convert 3 / 3	Torque Convert 3 / 3	Torque Convert 3 / 3
8.2	Operating pressure for attachments	bar	210	210	210
8.3	Oil volume	ℓ	135	135	135
8.4	Sound level at driver's ear according to DIN 12 053	db(A)	82	82	82
8.5	Tow coupling, type DIN		-	-	-



# Notes

A series of horizontal dotted lines for writing notes.



## Optional items

- **FORK (L x W x T)(mm)**

- 110D-7A

- 75 x 200 x 1,200 / 75 x 200 x 1,500 / 75 x 200 x 1,650 / 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-7A

- 85 x 200 x 1,200 / 85 x 200 x 1,500 / 85 x 200 x 1,650 / 85 x 200 x 1,800 / 85 x 200 x 2,100 / 90 x 200 x 2,440 / 90 x 200 x 2,600

- 160D-7A

- 90 x 200 x 1,200 / 90 x 200 x 1,500 / 90 x 200 x 1,650 / 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** : Duplex mast with free lift (160D-7A)/Triplex mast
- **MCV** : 4 - SPOOL / 5 - SPOOL
- **SEAT** : NON HEAT / HEAT , AIR SUSPENSION with HEAT
- **BEACON LAMP** : AMBER
- **FORK POSITIONER** :  $\varnothing 82 / \varnothing 100$
- **INTEGRAL SIDE SHIFT**
- **INTEGRAL SIDE SHIFT + FORK POSITIONER**
- **TERMINAL WEST SYSTEM (160D-7A)**
- **HYDRAULIC LINE** : 3 - SPOOL / 4 - SPOOL / 5 - SPOOL
- **TIRE** : PNEUMATIC / SOLID
- **WIDE CARRIAGE (2,730 mm) (160D-7A)**

\* 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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