

**MAVERICK**  
MATERIAL HANDLING

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**MAVERICK**  
MATERIAL HANDLING

# ICE FORKLIFT

1.8-3.8T Gasoline/LPG

1.8-3.8T Diesel



## FEATURES



## CONCEPT DESCRIPTION

independently developed the new product, an innovative line of internal combustion counterbalance forklifts, integrating cutting-edge technologies from its original products. This revamped series prioritizes enhanced aesthetics, energy efficiency, eco-friendliness, operator comfort, security, and reliability. These advancements aim to position the new series as a top-tier forklift range meeting diverse operational needs on a global scale

### Power and Performance

**Efficient Engines:** Equipped with high-efficiency internal combustion engines, ensuring stable and reliable power output, thereby enhancing forklift performance and efficiency.

**Stable Power Transmission:** Advanced transmission systems ensure smooth and reliable operation under various working conditions.

### Load Capacity and Applicability

**Wide Applicability:** Forklifts within this range are suitable for various industries, including manufacturing, warehousing, logistics, and construction. They can handle different sizes and shapes of goods and operate efficiently in narrow spaces.

**Load Capacity Selection:** There's a range of tonnage options available, from 1.8 to 3.5 tons. Hence, the suitable load capacity can be chosen according to specific handling requirements.

### Control and Maneuverability

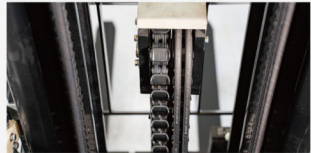
**Precise Control:** Equipped with precise control systems, allowing smooth acceleration and braking, improving operator maneuverability in narrow spaces.

**User-Friendly Interface:** Human-centric control panels and dashboards simplify operation processes, enhancing operational convenience.

### Comfort and Safety

**Human-Centric Cabin Design:** Comfortable seating, adjustable steering wheels, and ergonomic designs ensure operator comfort during long-term operations.

**Comprehensive Safety Features:** Equipped with multiple safety devices such as limiters, warning systems, and reverse radar, ensuring operator and surrounding environment safety.



#### Enhanced Visibility

The mast design offers an expanded field of view, supported by rear-mounted pipelines and an extended top for improved visibility during operations.



#### Improved Guard Design

Inclined shelves and a horizontal rail design on the top guard have been incorporated to enhance overall visibility.



#### Waterproof Connectors

Complete vehicle waterproof connectors ensure reliability and safety in various conditions.



#### Reinforced Hood Hinges

Strengthened hood hinges for increased durability and longevity.

**Enhanced Braking System:** Incorporation of a suspended brake pedal for improved braking efficiency and control.



#### Ergonomic Controls

Elevated steering wheel and multi-way valve operating handles have been positioned for improved ergonomics and operator comfort.



#### High-Quality Integrated Components

Integration of premium-quality covering parts for enhanced durability and seamless operation.



## CONCEPT DESCRIPTION

### Durability and Maintenance

**Robust Structural Design:** Strong structures and high-quality materials guarantee durability and stability of the forklift.  
**Ease of Maintenance:** Designed for easy maintenance, improving repair efficiency and reducing maintenance costs.

### Environmental-Friendly and Energy-Efficient

**Environmentally Conscious Design:** Complies with environmental standards. Euro 5 / Tier 4 engine available for selection reducing exhaust emissions and employing energy-saving technologies to minimize energy consumption.



Internal combustion forklifts focus on technological innovation and product quality, constantly pursuing excellence to provide users with efficient and reliable handling solutions. These internal combustion forklifts feature powerful engine systems and precise controls, making operations more efficient and safe. Additionally, the durability and reliability of Manforce forklifts are reasons why they are highly trusted.

## FEATURES



### Optimized Internal Space

Expanded internal frame space facilitates easier and more convenient maintenance procedures.



### User-Friendly Circuit System

The circuit system has been designed for easy maintenance and accessibility.



### Improved Cooling System

Enlarged water tank and optimized heat dissipation channels significantly enhance the vehicle's cooling efficiency, ensuring optimal performance even under high-temperature conditions.



### Casted Steering Axle

Implementation of a durable casted steering axle for enhanced stability and control.



### Improved Mast Strength and Rigidity

Strengthening the mast structure to ensure greater stability and resilience during operations.



### Reduced Front Overhang

Minimization of the front overhang to enhance overall truck stability, especially in handling loads.



### Enhanced Drive Axle Sealing Performance

Upgrades in the drive axle's sealing system to improve durability and prevent potential leaks.

# TRUCK SPECIFICATION

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General	1	Model		FD/FGL/FL18	FD/FGL/FL20	FD/F6L/FL25			
	2	Type		C3/K3/L3(LPG)	R3(1.8T)/S3(1.8T)/A3/H3/F3/B3/E3/I3(3.5T/3.8T)/G3(3.5T/3.8T)				
	3	Rated capacity		kg	1800	2000	2500		
	4	Load center		mm	500				
Characteristic & Dimension	5	Lift height		mm	3000				
	6	Mast tilt angle		F/R	6°/12°				
	7	Fork size		L×W×T	mm	920×100×35	1070×100×45	1070×122×40	
	8	Front overhang		mm	400	475	475		
	9	Rear overhang		mm	485	485	545		
	10	Min. ground clearance (Bottom of mast)		mm	125	125	125		
	11	Overall dimensions	Length to face of fork(without fork)		mm	2285	2560	2620	
	12		Overall width		mm	1090	1150	1150	
	13		Overall height	Overhead guard height		mm	2105	2180	2180
	14			Mast		mm	2010	2010	2010
	15			Mast extended height		mm	3985	3990	3990
	16	Min turning radius		mm	2080	2180	2230		
Performance	17	Speed	Travel (Unladen/Laden)		km/h	17/16(Diesel) 16/15(Gasoline/LPG)	18/17(Diesel) 19/18(Gasoline/LPG)		
	18		Lifting (Unladen/Laden)		mm/sec	550/520(Diesel) 520/500(Gasoline/LPG)	560/540(Diesel) 610/580(Gasoline/LPG)		
	19		Lowering (Unladen/Laden)		mm/sec	430	400	400	
	20	Max. Drawbar pull (Unladen/Laden)		KN	15/17	15/17	15/17		
	21	Max. Gradeability (Laden)		%	20	20	20		
Tyre	22	Tyre	Front	/	6.5-10-10PR	7.00-12-12PR			
	23		Rear	/	5.00-8-10PR	6.00-9-10PR			
	24	Tread	Front	mm	890	970			
	25		Rear	mm	920	980			
26	Wheelbase		mm	1400	1600				
Weight	27	Self weight		kg	2900	3580	3830		
	28	Weight Distribution	Laden	Front Axle	kg	2870	4860	5590	
	29			Rear Axle	kg	470	720	740	
	30		Unladen	Front Axle	kg	1050	1640	1570	
	31			Rear Axle	kg	1290	1940	2260	

# TRUCK SPECIFICATION

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General	1	Model		FD/FGL/FL30	FD/FGL/FL35	FD38			
	2	Type		C3/K3/L3(LPG)	R3(1.8T)/S3(1.8T)/A3/H3/F3/B3/E3/I3(3.5T/3.8T)/G3(3.5T/3.8T)				
	3	Rated capacity		kg	3000	3500	3800		
	4	Load center		mm	500				
Characteristic & Dimension	5	Lift height		mm	3000				
	6	Mast tilt angle		F/R	6°/12°				
	7	Fork size		L×W×T	mm	1070×125×45	1070×130×50	1070×130×50	
	8	Front overhang		mm	490	501	501		
	9	Rear overhang		mm	530	607	635		
	10	Min. ground clearance (Bottom of mast)		mm	140	140	140		
	11	Overall dimensions	Length to face of fork(without fork)		mm	2700	2770	2798	
	12		Overall width		mm	1210	1210	1210	
	13		Overall height	Overhead guard height		mm	2205	2205	2205
	14			Mast		mm	2075	2150	2150
	15			Mast extended height		mm	4100	4100	4100
	16	Min turning radius		mm	2450	2520	2545		
Performance	17	Speed	Travel (Unladen/Laden)		km/h	19/18(Diesel) 20/19(Gasoline/LPG)	19/17(Diesel)		
	18		Lifting (Unladen/Laden)		mm/sec	460/440(Diesel) 510/490(Gasoline/LPG)	370/360(Diesel) 420/400(Gasoline/LPG)		
	19		Lowering (Unladen/Laden)		mm/sec	400	450	450	
	20	Max. Drawbar pull (Unladen/Laden)		KN	15/17	15/17	15/17		
21	Max. Gradeability (Laden)		%	20	18	16			
Tyre	22	Tyre	Front	/	28*9-15-14PR				
	23		Rear	/	6.50-10-10PR				
	24	Tread	Front	mm	1000				
	25		Rear	mm	980				
26	Wheelbase		mm	1700					
Weight	27	Self weight		kg	4430	4800	4950		
	28	Weight Distribution	Laden	Front Axle	kg	6550	7340	7750	
	29			Rear Axle	kg	880	960	1000	
	30		Unladen	Front Axle	kg	1800	1850	1880	
	31			Rear Axle	kg	2630	2950	3070	

## MAST SPECIFICATION

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Type	Model	Max fork height mm	Overall height				Free lift		Front overhang		Tilt range		Capacity Load capacity at 500mm Single tyre	
			Lowered		Extended		Without backrest	With backrest	1.8t	FWD	BWD	1.8t		
			1.8t mm	2.5t mm	Without backrest 1.8t mm	With backrest 1.8t mm	mm	mm	mm	Deg	Deg	kg	kg	
Wide view 2 stage mast	M400	4000	2550	4885	4530	135	135	405	6	6	1700			
	TFM480	4800	2200	5695	5345	1635	1335	440	6	6	1300			
Full free 3 stage mast	TFM500	5000	2300	5895	5545	1725	1425	440	6	6	1200			
	TFM600	6000	2650	6895	6545	2075	1775	440	3	6	550			
	TFM650	6500	2815	7395	7045	2145	1945	440	3	6	300			

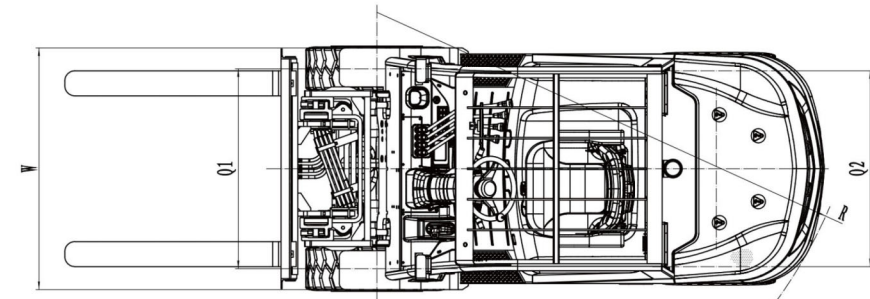
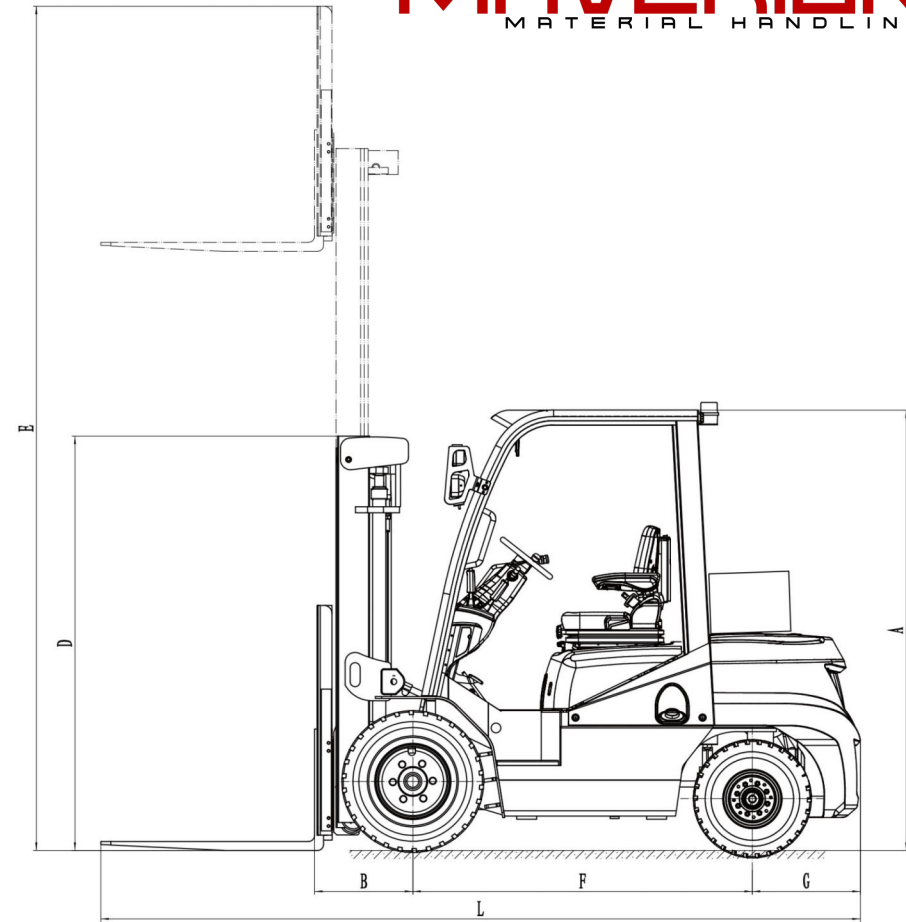
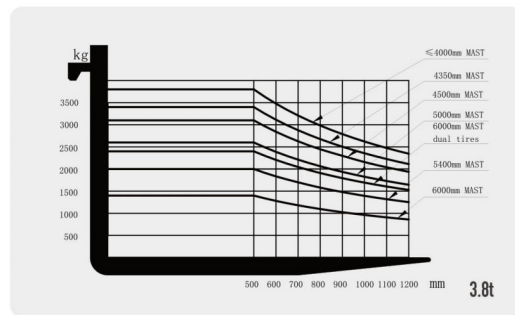
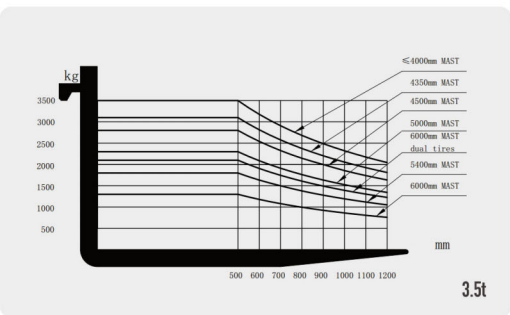
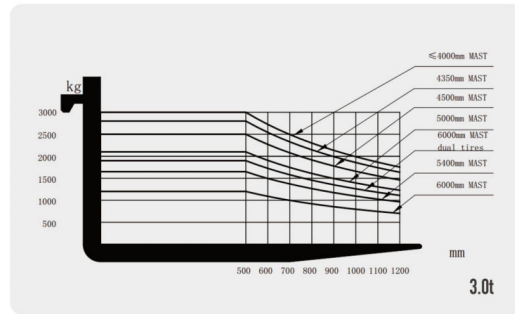
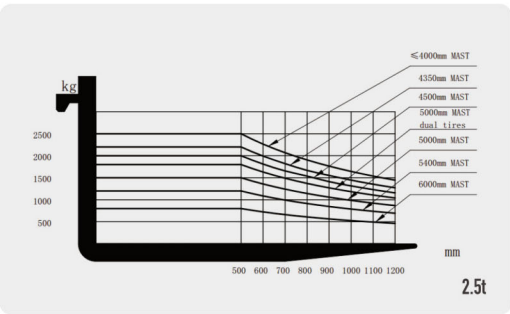
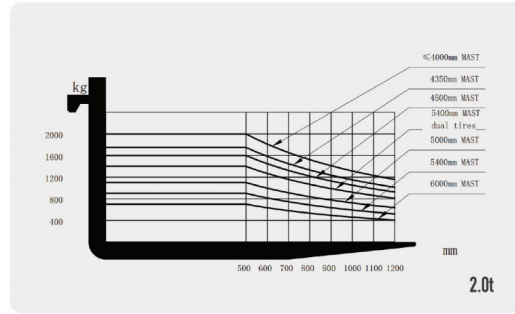
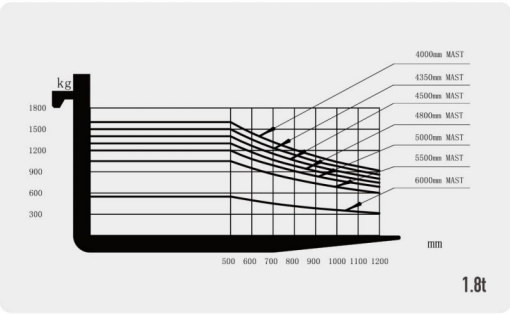
Type	Model	Max fork height mm	Overall height						Free lift		Front overhang		Tilt range		Capacity Load capacity at 500mm Single tyre	
			Lowered		Extended		Without backrest	With backrest	2t	2.5t	FWD	BWD	2t			
			2t mm	2.5t mm	Without backrest 2t mm	With backrest 2.5t mm	mm	mm	mm	mm	Deg	Deg	kg	kg		
Wide view 2 stage mast	M330	3300	2160	2160	3875	3875	4390	4390	160	160	476	476	6	12	2000	2500
	M350	3500	2260	2260	4075	4075	4590	4590	160	160	476	476	6	12	2000	2500
	M400	4000	2560	2560	4575	4575	5090	5090	160	160	476	476	6	6	2000	2500
	M450	4500	2810	2810	5075	5075	5590	5590	160	160	476	476	6	6	1600	2100
	M500	5000	3060	3060	5575	5575	6090	6090	160	160	476	476	6	6	1200	1600
	M600	6000	3610	3610	6575	6575	7090	7090	160	160	476	476	3	6	800	900
Full free 3 stage mast	TFM435	4350	2060	2060	4953	4953	5440	5440	1457	970	495	495	6	6	1750	2200
	TFM450	4500	2110	2110	5103	5103	5590	5590	1507	1020	495	495	6	6	1600	2000
	TFM480	4800	2210	2210	5403	5403	5890	5890	1607	1120	495	495	6	6	1250	1700
	TFM500	5000	2310	2310	5603	5603	6090	6090	1707	1220	495	495	6	6	1100	1500
	TFM600	6000	2660	2660	6603	6603	7090	7090	2057	1570	495	495	3	6	700	800
	TFM650	6500	2875	2875	7103	7103	7590	7590	2272	1785	495	495	3	6	400	500

## MAST SPECIFICATION

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Type	Model	Max fork height mm	Overall height				Free lift				Front overhang		Tilt range		Capacity Load capacity at 500mm Single tyre			
			Lowered		Extended		Without backrest	With backrest	3t	3.5t	3t	3.5t	FWD	BWD	3t			
			3t mm	3.5t mm	Without backrest 3t mm	With backrest 3.5t mm	mm	mm	mm	mm	mm	mm	Deg	Deg	kg	kg		
Wide view 2 stage mast	M330	3300	2225	2300	3938	4008	4482	4477	165	170	165	170	490	510	6	12	3000	3500
	M350	3500	2325	2400	4138	4208	4682	4677	165	170	165	170	490	510	6	12	3000	3500
	M400	4000	2625	2700	4638	4708	5182	5177	165	170	165	170	490	510	6	6	3000	3300
	M450	4500	2875	2950	5138	5208	5682	5677	165	170	165	170	490	510	6	6	2600	2900
	M500	5000	3125	3200	5638	5708	6182	6177	165	170	165	170	490	510	6	6	2100	2400
	M600	6000	3675	3750	6638	6708	7182	7177	165	170	165	170	490	510	3	6	1300	1400
Full free 3 stage mast	TFM435	4350	2075	2150	5068	5138	5532	5527	1357	1362	893	973	500	510	6	6	2800	3100
	TFM450	4500	2125	2200	5218	5288	5682	5677	1407	1412	943	1023	500	510	6	6	2500	2800
	TFM480	4800	2225	2300	5518	5588	5982	5977	1507	1512	1043	1123	500	510	6	6	2250	2500
	TFM500	5000	2325	2400	5718	5788	6182	6177	1607	1612	1143	1223	500	510	6	6	2100	2300
	TFM600	6000	2675	2750	6718	6788	7182	7177	1957	1962	1493	1573	500	510	3	6	1200	1300
	TFM650	6500	2892	2965	7218	7288	7682	7677	2174	2177	1710	1788	500	510	3	6	700	800

Type	Model	Max fork height mm	Overall height			Free lift		Front overhang		Tilt range		Capacity Load capacity at 500mm Single tyre	
			Lowered	Extended	With backrest	Without backrest	With backrest	3.8t	FWD	BWD	3.8t		
			3.8t mm	3.8t mm	3.8t mm	3.8t mm	3.8t mm	mm	Deg	Deg	kg	kg	
Wide view 2 stage mast	M330	3300	2300	4008	4477	170	170	510	6	12	3800		
	M350	3500	2400	4208	4677	170	170	510	6	12	3800		
	M400	4000	2700	4708	5177	170	170	510	6	6	3600		
	M450	4500	2950	5208	5677	170	170	510	6	6	3200		
	M500	5000	3200	5708	6177	170	170	510	6	6	2700		
	M600	6000	3750	6708	7177	170	170	510	3	6	1500		
Full free 3 stage mast	TFM435	4350	2150	5138	5527	1362	973	510	6	6	3400		
	TFM450	4500	2200	5288	5677	1412	1023	510	6	6	3100		
	TFM480	4800	2300	5588	5977	1512	1123	510	6	6	2800		
	TFM500	5000	2400	5788	6177	1612	1223	510	6	6	2600		
	TFM600	6000	2750	6788	7177	1962	1573	510	3	6	1400		
	TFM650	6500	2965	7288	7677	2177	1788	510	3	6	800		



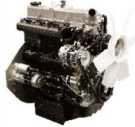
# Diesel Engines

**A3 Type**  
**VANMAR**




Model:4TNE 98  
 Rated Output:43/2200kw/r.p.m  
 Rated Torque:184-206/1700 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:98mm×110mm  
 Displacement:3.319L  
 Range:2.5T/3T/3.5T/3.8T Diesel

**B3 Type**  
**MITSUBISHI**



Model:SAS  
 Rated Output:35.3/2250kw/r.p.m  
 Rated Torque:170/1700 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:94mm×120mm  
 Displacement:3.331L  
 Range:2.5T/3T/3.5T/3.8T Diesel

**E3 Type**  
**LS**



Model:LACRV-T4 EUV  
 Rated Output:42/2300kw/r.p.m  
 Rated Torque:208/1600 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:88mm×103mm  
 Displacement:2.505 cc  
 Range:2.5T/3T/3.5T/3.8T Diesel ( EUV )

**H3 Type**  
**XINCHAI**(common rail)



Model:4D29X41-030  
 Rated Output:36.8/2500kw/r.p.m  
 Rated Torque:190(1400-1800) N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:93mm×105mm  
 Displacement:2.85L  
 Range:2.5T/3T/3.5T Diesel ( common rail )

**I3 Type**  
**XINCHAI**(common rail)



Model:4D32X41-017  
 Rated Output:36.8/2500kw/r.p.m  
 Rated Torque:210(1400-1600) N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:98mm×105mm  
 Displacement:3.18L  
 Range:3.5T/3.8T Diesel ( common rail )

**F3 Type**  
**XINCHAI**



Model:4D27G31-012  
 Rated Output:36.8/2500kw/r.p.m  
 Rated Torque:156(1700-1900) N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:90mm×105mm  
 Displacement:2.67L  
 Range:2.5T/3T Diesel

**S3 Type**  
**XINCHAI**



Model:4N23G31-007  
 Rated Output:30.2/2400kw/r.p.m  
 Rated Torque:131(1700-1900) N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:85mm×100mm  
 Displacement:2.27L  
 Range:1.8T Diesel

**R3 Type**  
**VANMAR**




Model:4TNE 92  
 Rated Output:33/2450kw/r.p.m  
 Rated Torque:150/1600 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:91mm×110mm  
 Displacement:2.659L  
 Range:1.8T Diesel

**Q3 Type**  
**XINCHAI**



Model:3E221051  
 Rated Output:44.8/2400kw/r.p.m  
 Rated Torque:210(1400-1800) N.m/r.p.m  
 No. of cylinder:3  
 Bore\*Stroke:94mm×107mm  
 Displacement:2.23L  
 Range:2.5T/3T/3.5T/3.8T Diesel(EUV)


**G3 Type**  
**XINCHAI**



Model:4D32G31-004  
 Rated Output:36.8/2400kw/r.p.m  
 Rated Torque:186(1600-1800) N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:98mm×105mm  
 Displacement:3.17L  
 Range:3.5T/3.8T Diesel

# LPG Engines

**C3 Type**  
**GCT**



Model:K25  
 Rated Output:37.4/2300kw/r.p.m  
 Rated Torque:176.5/1600 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:89mm×100mm  
 Displacement:2.488L  
 Range:2.5T/3T/3.5T LP6&GASOLINE

**K3 Type**  
**HYUNDAI**



Model:HMC 2.4L L4KB CF32  
 Rated Output:43.5/2400 kw/r.p.m  
 Rated Torque:173/2000 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:88mm×97mm  
 Displacement:2.359L  
 Range:2.5T/3T/3.5T LP6&GASOLINE

**L3 Type**  
**HYUNDAI**



Model:HMC 2.4L L4KB CF31  
 Rated Output:45.1/2400 kw/r.p.m  
 Rated Torque:172/2000 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:88mm×97mm  
 Displacement:2.359L  
 Range:2.5T/3T/3.5T LP6

**T3 Type**  
**GCT**



Model:K21  
 Rated Output:31.2/2250kw/r.p.m  
 Rated Torque:143.7/1800 N.m/r.p.m  
 No. of cylinder:4  
 Bore\*Stroke:89mm×83mm  
 Displacement:2.065L  
 Range:1.8T LP6&GASOLINE

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