

**1-2.5 ton  
AC ELECTRIC  
FORKLIFT**

**HELI**

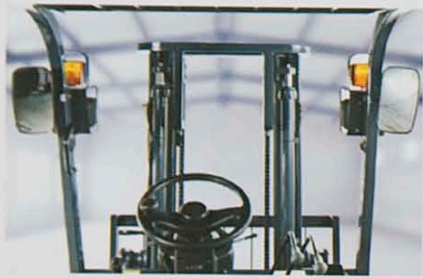
Heli UK • Unit 10 • Hewitts Ind Est • Elmbridge Road  
Cranleigh • Surrey • GU6 8LW • United Kingdom  
[www.heliuk.com](http://www.heliuk.com)



# AC ELECTRIC FORKLIFT 1-2.5 ton

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## Newly designed wide-view mast



The newly designed wide-view mast enlarges operators' view effectively and lessens the blind area to provide a clearer vision.

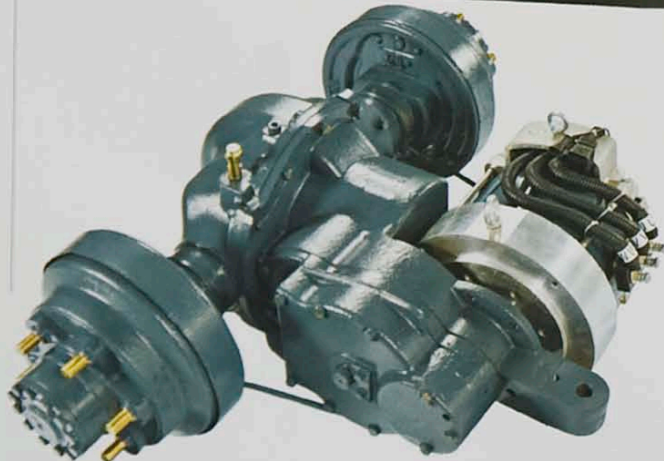
## Excellent steering system



The Steering system with new technologies not only provides a smoother swerve and faster positioning & steering, but also effectively lowers down the noise.

- ✓ New integrated load-sensing steering
- ✓ Power Steering
- ✓ New low-noise gear pump with differential tooth technology

## AC drive motor



The wonderful combination of high-power AC motor and the new style gearbox by independent R&D fully enhance the performance of acceleration, driving and grade ability.

- ✓ Large ratio gearbox
- ✓ Motor maintenance
- ✓ Maintain more efficient
- ✓ Renewable energy technologies

1-1.5 ton **↑ 15%** THE MAXIMUM TRAVEL SPEED INCREASES

2-2.5 ton **↑ 11%** THE MAXIMUM TRAVEL SPEED INCREASES

1-1.5 ton **↑ 20%** GRADIENT PERFORMANCE INCREASES

2-2.5 ton **↑ 50%** GRADIENT PERFORMANCE INCREASES

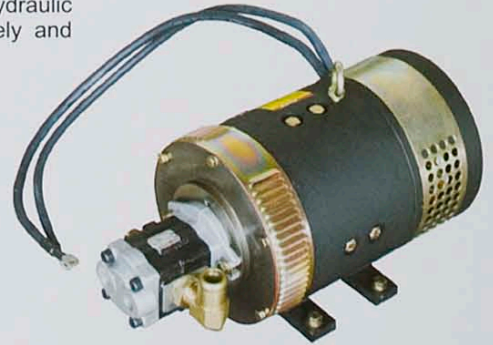
## High efficiency loading/unloading performance

The innovative design and configuration of hydraulic system improve the working efficiency largely and provide a very efficient loading/unloading.

**↑ 20%** THE MAXIMUM UNLOADED LIFTING SPEED INCREASES

**↑ 12%** THE MAXIMUM LOADED LIFTING SPEED INCREASES

- ✓ New low-speed & high-torque lifting motor
- ✓ MOSFET lifting controller
- ✓ New dynamic load sensing technology in hydraulic system
- ✓ Optional AC lifting system greatly enhances the loading/unloading performance.



## Enough operation space

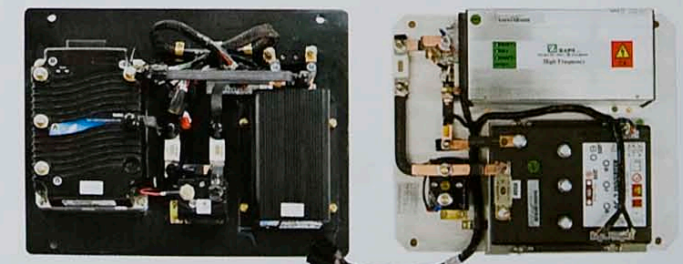
The new optimization layout widens the operator space for ensuring more comfortable and convenient operation.



## More intelligent performance

The truck equipped with more intelligence functions not only ensures the safety performance, but also improves the efficiency and reduces energy consumption.

- ✓ Standard CAN BUS
- ✓ Self-braking on ramp
- ✓ Preventing abnormality operating
- ✓ AC traction controller
- ✓ Emergency power shut-down
- ✓ Electric controller self-protecting
- ✓ Presence of driver sensing system
- ✓ Speed selection function (normal/cutback)



CURTIS CONTROLLER

ZAPI CONTROLLER

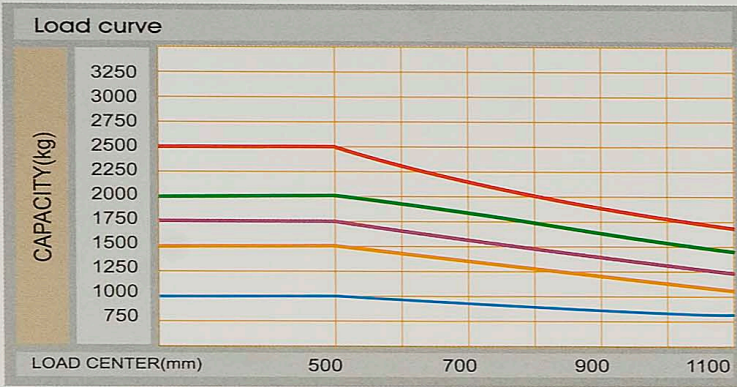
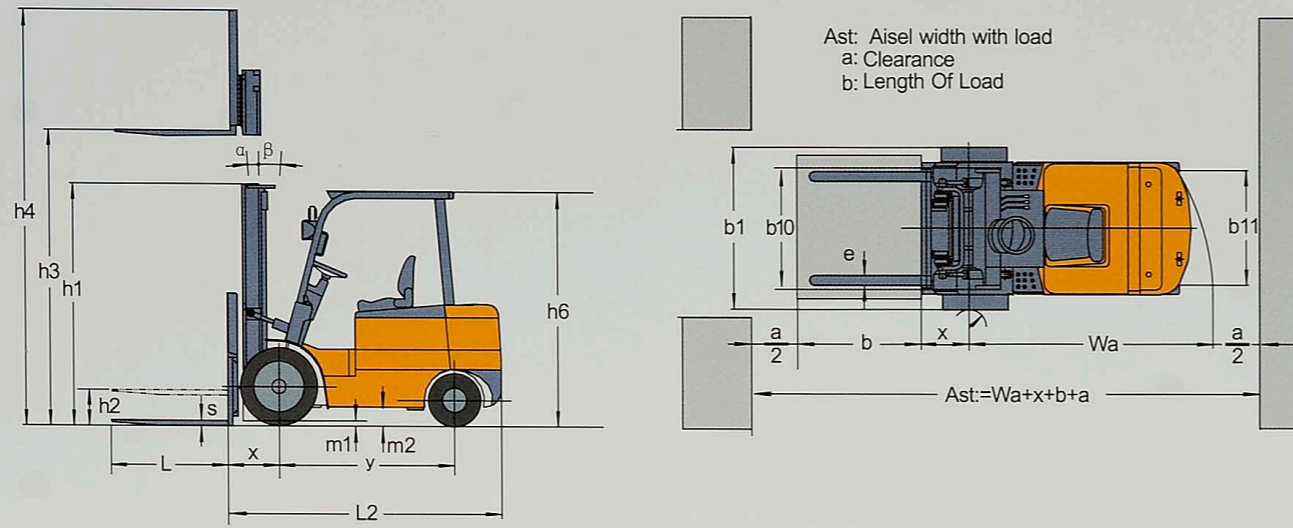


AC ELECTRIC FORKLIFT **1-2.5 ton**



**Manufacturers Data and Design Characteristics**

Characteristics		HELI												
		CPD10		CPD15				CPD18		CPD20		CPD25		
		FJ1	FJ2	FJ1	FJ2	CJ1	CJ2	CJ1	CJ2	FJ1	FJ2	FJ1	FJ2	
1.01	Manufacture's Name	HELI												
1.02	Model Designation													
1.03	Configuration Number													
1.04	Load Capacity	Q (kg)	1000		1500				1750		2000		2500	
1.05	Load Center	c (mm)	500											
1.06	Power Type	Battery												
1.07	Operator Type	Seated												
1.08	Wheelbase	y (mm)	1250		1250		1370		1370		1515		1515	
Wheels & Tyres														
2.01	Tyre Type	Pneumatic												
2.02	Tyres Number (Front/Rear)	2/2												
2.03	Tread(centre of tyre),front	b10 (mm)	950		950		950		1000		1000			
2.04	Tread(centre of tyre),rear	b11 (mm)	920		920		920		950		950			
2.05	Tyre Size, Front	6.50-10-10PR						7.00-12-12PR						
2.06	Tyre Size, Rear	5.00-8-10PR						18×7-8-14PR						
Dimensions														
3.01	Load Distance	x(mm)	422		425		425		483		483			
3.02	Mast Tilt Angle,F/R	$\alpha / \beta$ (°)	6/12		6/12		6/12		6/12		6/12		6/12	
3.03	Height with Mast Lowered	h1 (mm)	1995		1995		1995		2000		2000			
3.04	Free Lift	h2 (mm)	150		155		155		170		170			
3.05	Standard Lift Height	h3 (mm)	3000		3000		3000		3000		3000		3000	
3.06	Height with Mast Extended	h4 (mm)	4008		4005		4005		3995		3995		3995	
3.07	Overhead Guard Height	h6 (mm)	2130	2130		2160		2160		2130		2130		
3.08	Fork Size	s/e/L(mm)	32×100×770		35×100×920				35×100×920		45×100×920		45×100×1070	
3.09	Fork Carriage to DIN 15173 A/B		2A		2A		2A		2A		2A		2A	
3.10	Length to fork face	L2 (mm)	2006	2040		2130		2153		2398		2398		
3.11	Overall Width	b1 (mm)	1070		1070		1070		1150		1150			
3.12	Outside Turning Radius	Wa (mm)	1800	1820		1930		1960		2065		2065		
3.13	Ground Clearance at mast ,Loaded	m1 (mm)	110		110		110		140		140			
3.14	Ground Clearance at centre of wheelbase ,Loaded	m2 (mm)	125		125		125		155		155			
3.15	Right Stack Aisle width (Pallet size 1200x1200mm,clearance:200mm)	Ast (mm)	3420	3445		3560		3590		3748		3808		
3.16	Right Stack Aisle width (Pallet size 1000x1000mm,clearance:200mm)	Ast (mm)	3620	3645		3760		3790		3948		3948		
Performances														
4.01	Travel Speed,with/without load	km/h	14/15		14/15				14/15		14/15		14/15	
4.02	Lifting Speed,with/without load	m/s	0.29/0.45		0.29/0.45				0.28/0.53		0.28/0.49		0.26/0.49	
4.03	Lowering Speed	m/s	0.45											
4.04	Gradient performance with load	%	18		17				15		16		15	
4.05	Max. draw bar pull with load	N	7800	8600		8800		9500		12300		12800		
4.06	Acceleration time (10 metres) W/O load	s	4.4/4.1		4.5/4.2				4.8/4.5		4.8/4.3		5.0/4.6	
Weight														
5.01	Total Approximate Weight(W/O battery)	kg	2650	2950		3000		3250		4050		4200		
5.02	Axle Loading*: Unloaded,Front/Rear	kg	1200/1450		1330/1620				1450/1800		1820/2230		1900/2300	
5.03	Axle Loading*: Loaded,Front/Rear	kg	3285/365		4000/450				4030/470		4500/500		5450/600	
6030/670														
Battery														
6.01	Battery Voltage/rated capacity(5h)	V/Ah	48/400				48/550				48/600			
6.02	battery weight	kg	975				1075				1125			
6.03	Compartment for Battery Size	mm	617x980x465				727x980x500				525x1050x807			
Motor & Controller														
7.01	Drive Motor - 60 Min. Rating	kW	8.0(AC)								11.1(AC)			
7.02	Pump Motor - 15 Min. Rating	kW	7.5(DC)								8.6(DC)			
7.03	Drive Motor Control Method	MOSFET/AC												
7.04	Pump Motor Control Method	MOSFET/DC												
7.05	Service Brake/Parking Brake	Hydraulic/Mechanical												
7.06	Relief Pressure	Mpa	14.5	14.5		14.5		17.5		17.5		17.5		



1.0t 1.5t 1.8t 2.0t 2.5t

**Note:**  
Vertical axle stands for load capacity while horizontal axle stands for load center. Load center is the distance counted from the front of the fork. The base point of the standard load is the center point of the cubic with the same 1000mm dimension in length, width and height. The load capacity should be down, if mast tilts forward, using non-standard forks or loading goods with extra width. Please notice the different load capacity between different load centers according to load chart.

WIDE VIEW MAST										
Mast model	Max. fork height (mm)	Load Capacity (Load centre 500mm) (kg)					Overall Height (mm)		Tilt Angle (F-B)	
		CPD10	CPD15	CPD18	CPD20	CPD25	1-1.8t	2-2.5t		
M200	2000	1000	1500	1750	2000	2500	1495	1500	6-12	
M250	2500	1000	1500	1750	2000	2500	1745	1800	6-12	
M300	3000	1000	1500	1750	2000	2500	1995	2000	6-12	
M330	3300	1000	1500	1750	2000	2500	2145	2150	6-12	
M350	3500	1000	1500	1750	2000	2500	2245	2250	6-12	
M370	3700	1000	1500	1750	2000	2450	2345	2350	6-6	
M400	4000	1000	1500	1700	2000	2400	2545	2550	6-6	
M425	4250	1000	1400	1650 *1750	1850	2250	2670	2675	6-6 *6-12	
M450	4500	950	1350	1550 *1700	1800	2150	2795	2800	6-6 *6-12	
M500	5000	930	1000 *1250	1000 *1600	1600 *1700	2000	3045	3050	6-6 *6-6	
M550	5500	900	900 *1150	950 *1500	1500 *1600	1900	3345	3350	*3-6	
M600	6000	600 *850	600 *1050	600 *1400	950 *1500	1800	3595	3600	*3-6	

WIDE VIEW FULL FREE 2-STAGE MAST											
Mast model	Max. fork height (mm)	Load Capacity (Load centre 500mm) (kg)					Overall Height (mm)		Free lift (With STD backrest) (mm)		Tilt Angle (F-B)
		CPD10	CPD15	CPD18	CPD20	CPD25	1-1.8t	2-2.5t	1-1.8t	2-2.5t	
ZM200	2000	1000	1500	1750	2000	2500	1535	1535	490	495	6-12
ZM250	2500	1000	1500	1750	2000	2500	1745	1745	735	745	6-12
ZM300	3000	1000	1500	1750	2000	2500	1995	1995	985	995	6-12
ZM330	3300	1000	1500	1750	2000	2500	2145	2145	1135	1145	6-12
ZM350	3500	1000	1500	1750	2000	2500	2245	2245	1235	1245	6-12
ZM370	3700	1000	1500	1750	2000	2450	2345	2370	1360	1370	6-6
ZM400	4000	1000	1500	1700	2000	2400	2545	2545	1535	1545	6-6
ZM425	4250	1000	1400	1650 *1750	1850	2250	2670	2670	1660	1670	6-6 *6-12
ZM450	4500	950	1350	1550 *1700	1800	2150	2795	2795	1785	1795	6-6 *6-12
ZM500	5000	930	1000 *1250	1000 *1600	1600 *1700	2000	3045	3045	2035	2045	6-6 *6-6
ZM550	5500	900	900 *1150	950 *1500	1500 *1600	1900	3345	3345	2335	2345	*3-6
ZM600	6000	600 *850	600 *1050	600 *1400	950 *1500	1800	3595	3595	2585	2595	*3-6

WIDE VIEW FULL FREE 3-STAGE MAST											
Mast model	Max. fork height (mm)	Load Capacity (Load centre 500mm) (kg)					Overall Height (mm)		Free lift (With STD backrest) (mm)		Tilt Angle (F-B)
		CPD10	CPD15	CPD18	CPD20	CPD25	1-1.8t	2-2.5t	1-1.8t	2-2.5t	
ZSM360	3600	1000	1450	1750	2000	2400	1790	1795	750	755	6-6
ZSM400	4000	1000	1400	1600	1900	2300	1920	1920	880	880	6-6
ZSM435	4350	950	1300	1500 *1700	1850	2200	2040	2045	1000	1005	6-6 *6-6
ZSM450	4500	950	1300	1500 *1650	1750	2100	2090	2095	1050	1055	6-6 *6-6
ZSM470	4700	930	1280	1450 *1600	1720	2000	2160	2160	1120	1120	6-6 *6-6
ZSM480	4800	920	1250	1400 *1580	1700	1950	2190	2195	1150	1155	6-6 *6-6
ZSM500	5000	900	1000 *1200	1000 *1550	1600	1600 *1900	2290	2295	1250	1255	6-6 *6-6
ZSM540	5400	750 *900	800 *1150	800 *1480	1500	1500 *1800	2420	2420	1380	1380	3-6 *3-6
ZSM600	6000	550 *850	550 *1050	550 *1380	950 *1450	1500 *1700	2650	2645	1610	1605	3-6 *3-6
ZSM650	6500	*800	*1000	*1250	600 *1300	600 *1500	2855	-	1815	-	*3-6

NOTE: (1)\* Rated capacity with front dual tires;  
(2)CPD10-18:The free height of full free 2-stage mast without backrest increase 470mm;  
CPD10-18:The free height of full free 3-stage mast without backrest increase 470mm;  
(3)CPD20-25:The free height of full free 2-stage mast without backrest increase 435mm;  
CPD20-25:The free height of full free 3-stage mast without backrest increase 435mm;

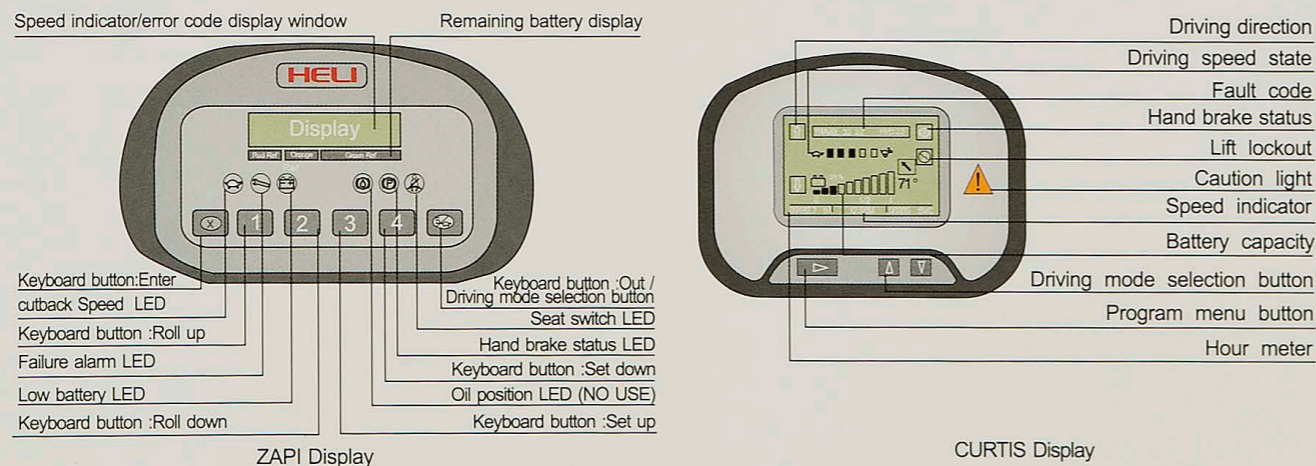


**Renewable energy technologies**

With the use of the excellent load-sensing steering system and AC controlling renewable energy technologies, the forklift is more energy-saving and the working hour of the battery is extended by 15%.

**↑15%**  
THE PERFORMANCE OF BATTERY INCREASES

The reliable special instrument gives a complete display of the vital information, like operation status, fault detection, etc. It ensures the operator predominate the vehicle status more intuitive and convenient.





## 1.25 ton AC ELECTRIC FORKLIFT

### STANDARD EQUIPMENT

Wide view mast  
Standard fork  
II (III) fork carriage  
Backrest  
Two-spool control valve  
Battery group  
Standard seat  
Overhead guard  
Overhead guard raincoat  
LCD combined display  
Pneumatic tyres  
Traction bar  
Attached tools

### OPTIONS

Boom  
Cab  
Load hook  
String bar  
Hinged fork  
Back view mirror  
Side shifter  
Paper roll clamp  
Alarm lamp  
Solid tyre  
Rear work lights  
Protective fences  
Multi function barrel clamp  
Load stabilizer  
Widened fork carriage  
Lengthened fork  
Load pusher  
Fork sleeve  
Rotating flat clamp  
Dual-tyres protector  
Accessory hydraulic component  
Tilt/Steering cylinder protection sleeve  
Colored tyre(white/green)  
Wide view double/triplex full free mast  
User-specified color