

## 1.5T - 2.0T Battery Operated Forklift Truck

Capacity : 1500 / 2000 kg  
at 500 mm LC



- ✓ Ergonomical and Modern looking Forklift
- ✓ Reduced Energy Consumption
- ✓ Longer Hours of Forklift Operation
- ✓ Variable Lifting speeds Adaptable to varying Customer Applications
- ✓ Clear Visibility Mast

**MAX**

**Reliability  
Performance  
Productivity**

**19+ Safety Features**

## Drive Comfort Drive Productivity ...

### Do You Know

- You can increase productivity by manifold by using right material handling equipment.
- Labor dependency can be reduced to a great extent by using MH equipments.
- Annual World wide material handling equipment volume is more than 1 million.
- Annual Indian market is approximate 10,000 units and is less than 1% of global volume.
- KION group is worldwide leader in Material Handling equipment.
- KION India is pioneer in Indian MH market for more than 50 year through VOLTAS brand of equipments.
- More than 10,000 Voltas forklifts are working in Indian market.
- KION India is having leadership position in IC truck in India.
- KION India makes Battery operated Fork Lifts with latest design and world class technology which ensures maximum energy saving and maximum productivity.



High Powered  
40V drive

Split rim design



Single Motor for  
Mast & Steer  
Operations

Dual Controller  
System

#### DRIVE MOTOR

Drive motor (AC) (triple motor with dual "Y" insulation) is designed to provide high starting torque and withstand high temperatures in the most demanding applications. Highly shock resistant. The motor provides working conditions for durability and performance life.

#### STEER MOTOR

The steer motor is supported on rubber pads for reduced vibration and noise emission. The motor is cooled around with class F insulation and features cooling fan. Oil alternative AC Motor for maintenance free operation. Pump motor is managed by dedicated pump control system optimizing the motor performance in accordance with demand thus giving high operating efficiency & make the unit also eliminating the separate motor drive.

#### HYD CONTROL

It offers all the high power built into the motor power used to raise the mast - for the controlled AC motor controller. This will provide class B torque control with Regenerative braking.

A self diagnostic self-correcting display system built into the controller which constantly monitors the electrical parts system and indicates diagnostic codes. The control system provides smooth step-less acceleration, variable speed control and precise parking and manoeuvring control system.

The regenerative braking feature is an effective fuel saver that eliminates the need for fuel brake line spring energy and reduces operator fatigue. The Hyster Converter is located adjacent to the Operator for quick safety disconnection.

#### TRANSMISSION

A three stage reduction drive chain features helical gear reduction specially designed for smooth & quiet operation. Turbo motor can be installed to improve without affecting torque output. All bearing and design features from a truck are certified by the axle bearing and set by the drive shaft.

#### WHEELS

Wheels fully break through are coated in steel shoes and operate independently mounted brake drums. Shoes are self-adjusting. The service brake is operated by an ergonomically located pedal. The performance parking brake is activated by handle located on the seat.

#### MAST CARRIAGE & FORKS

An excellent design supported by superior welding process ensures light weight and expensive high visibility mast. High visibility engine lights standard. Capture Full Flow Lift. These features ensure are suitable for a variety of applications including container stacking, ruffing. High visibility damage will improve visibility in standard. Features of work visibility safety.

#### STEERING

The axle is fabricated from steel tubes for durability and strength. The axle is supported in the frame by using hardened steel bearing for providing the required articulation. The integrated ball joint cover cylinder is cast protected inside the axle tube. The axle assembly also pairs up joint for ease of maintenance. It provides accurate steering geometry, transmits low wear and allows strong shock-carrying to greater maneuverability.

#### HYDRASTATIC POWER STEERING

The dual setting hydrostatic power steering provides a single touch stiffness, smooth steering, enhancing operator comfort. It conserves battery energy for other motor operations for minimal response time. In the unlikely event of pump pressure failure, the truck can be steered to destination.

#### FRAME, BATTERY COMPARTMENT AND CABINET

The frame is designed for maximum maneuverability and efficiency by finite element analysis technique. It is fabricated from heavy steel plates using latest welding process, ensuring excellent rigidity and strength.

Control panel within the chassis the battery is mounted in position to push. Hood assembly is supported by gas springs for ease of opening/maintenance.

An integral battery integrated with the frame body provides a safe enclosure for operator convenience. 36V/200Ah

#### HYDRAULIC SYSTEM

Hydraulic system consists of reservoir, pump, directional control valve, cylinder and lift line (Hyster system with hydraulic protection, under pressure and 20 micron replaceable inline line filter. Pressure relief, 20 lock and flow regulation are provided for safety. The lift lock feature control valve protects against inadvertent descent of while providing precise load positioning. This makes performance is controlled with hydraulic flow control. This existing power saving with increased operator safety.

#### INSTRUMENTATION AND CONTROLS

Panel are provided for instrumentation and lighting. These are located ergonomically with simple leg reach to the operator. Instrumentation panel is accessible type mounted on the steering column for easy operation. Hydraulic control valve lever are ergonomically positioned for fatigue free operation.

Hour meter and battery state of charge gauge housed in an elegantly designed IP67 housing are available as standard. An enhanced dash display provides battery state of charge display. Controller diagnostic. Bulb-outside available as optional to meet the customer.

#### OPTIONAL

1. All-terrain
2. Non-slip safety tread on the mast and other parts
3. High Bay battery codes with 550Ah
4. Proximity horn

## SALIENT FEATURES



Powerful energy efficient diesel



Heavy duty steel axle for rugged operators



3000-hour rated axle for easy maintenance



3000-hour rated front wheel for easy maintenance



48V battery & AC system for longer hours of operation



Maximum load overhang for less forking noise



Large front tires for enhanced road grip and stability



Large front view Powerwin on board diagnostics



Ergonomically braced wheel for ease in operation



Ample leg room for operator comfort



Large operator hand control for easy grip



Easy access maintenance points



Ride wire hand for clear foot operator visibility



Wider Operator foot rest for safer entry and exit



High-Intensity rear Combination LED and Beacon lights

### MAIN CONFIGURATIONS

TYPE OF BATTERY	MAXI WEIGHT	Cap. M³	TYR. Ht. (mm)	HT. Ht. (mm)	HT. Ht. (mm)	Cap. (kg/m³) with L20 18 (mm)	TOT WEIGHT (kg) with 20000 L20 18 (mm)	(L2000) (kg) with 20000 L20 18 (mm)
1-Bay	400	200	18	300	470	6.10	604-700	
2-Bay	800	400	18	300	470	6.10	600	
3-Bay	1200	600	18	300	470	6.10	600	
4-Bay	1600	800	18	300	470	6.10	600	
5-Bay	2000	1000	18	300	470	6.10	600	

NOTE: Consider Height (TYR) - Free-Pair Height (HT) - Max Pair Height (HT) - Towbar (2000) - Balance  
 \*Capacity may decrease by driving with overload

## Safety Features Offering in EVX Max Series Fork Lifts

No.	Safety Features	Advantage	Remarks
1	Flow Control valve in hydraulic cylinder	In case of rupture of hose/cylinder controlled lowering possible	Standard
2	Corroded working hydraulic system hoses	Safe for operator following clearance of lateral storage	Standard
3	Seat belt	Operator safety	Standard
4	Beacon light/flam light	Safe working	Standard
5	Lift lock	In case of battery charging going down sufficient to drive it to charging station by locking lifting system	Standard
6	Tilt lock valve	Load will not drift if truck is in switched off condition	Standard
7	Neutral interlock	Truck will not move unless it is in neutral position. Warning will appear	Standard
8	Intelligent drive control	Right sequence of gear shifting and acceleration	Standard
9	Regenerative braking	In case of coast brake failure machine will stop in deceleration	Standard
10	Anti roll back	At slope machine will not be reversing even if operator not pressing the accelerator	Standard
11	Heavy duty box type overhead guard	Operator safety from falling object	Standard
12	Intelligent pump controller	Just like hydraulic operation	Standard
13	Independent parking brake	In case of hydraulic failure, brake will function normally	Standard
14	Fork Lock	Fork will not come out from mast slot	Standard
15	Heavy duty box type Rear axle	For rugged operation	Standard
16	GPS*	No function if truck happen unless operator sits properly	Optional
17	Biometric*	Truck will be operated by authorized operator only	Optional
18	Automatic speed reduction at turning*	Safe at turnings	Optional
19	Side view out of battery*	Easy/fortified anti so on care required	Optional

\* Optional safety features

## Running Cost Calculation of 3 yrs for Electric & Diesel counterbalance Truck

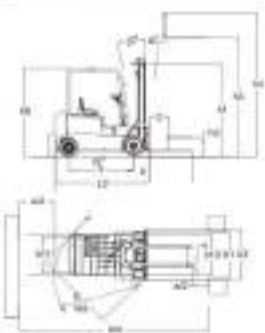
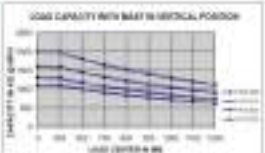
Sl. No.	Part	Quantity	Unit	Expense				
				MRP	Electric Truck	MRP	Diesel Truck	
1	Mast OH	1	Ex	17000	12750	17000	12750	0.75
2	Steer Axle OH	1	HT	28000	18750	28000	18750	0.75
3	Gear OH	75	Lr	3000	2250	3000	2250	0.75
4	Hydraulic Oil	100	Lr	24000	18000	24000	18000	0.75
5	Steer OH	4	Ex	28000	15000	28000	15000	0.75
6	Electric Charge	18750	1/MT	180000	300000	0	0	0.75
7	Diesel Charge	12000	0	0	0	720000	720000	0.75
8	Engine OH	1	Ex	0	0	480000	480000	0.75
9	Tires	4	Ex	32000	24000	48000	32750	0.75
10	Engine Oil	120	Lr	0	0	24000	18000	0.75
11	Filters	3	00	8000	6750	48000	32750	0.75
12	Motor Servicing	2	Ex	18000	1500	0	0	0.75
13	Crack Maintenance	1	Ex	0	0	20000	18750	0.75
	TOTAL				208000		948000	0.75
	Running Cost per day				92		3180	0.75

\* Above costs are an estimator basis

**SPECIFICATIONS - FT AC ELECTRIC FORKLIFT**

ITEM NO.	DESCRIPTION	KION INDIA	
		UNIT	VALUE
01	MAXIMUM LIFT		3000
02	LOAD CAPACITY		2000
03	MAXIMUM SPEED		30
04	MAXIMUM ACCELERATION		0.5
05	MAXIMUM DECELERATION		0.5
06	MAXIMUM TIPPING SPEED		30
07	MAXIMUM TIPPING ACCELERATION		0.5
08	MAXIMUM TIPPING DECELERATION		0.5
09	MAXIMUM TIPPING STOPPING DISTANCE		10
10	MAXIMUM TIPPING STOPPING TIME		10
11	MAXIMUM TIPPING STOPPING ACCURACY		±10
12	MAXIMUM TIPPING STOPPING STABILITY		±10
13	MAXIMUM TIPPING STOPPING SAFETY		±10
14	MAXIMUM TIPPING STOPPING PROTECTION		±10
15	MAXIMUM TIPPING STOPPING CONTROL		±10
16	MAXIMUM TIPPING STOPPING MONITORING		±10
17	MAXIMUM TIPPING STOPPING ALARM		±10
18	MAXIMUM TIPPING STOPPING INDICATOR		±10
19	MAXIMUM TIPPING STOPPING DISPLAY		±10
20	MAXIMUM TIPPING STOPPING LOGGING		±10
21	MAXIMUM TIPPING STOPPING REPORTING		±10
22	MAXIMUM TIPPING STOPPING ANALYSIS		±10
23	MAXIMUM TIPPING STOPPING OPTIMIZATION		±10
24	MAXIMUM TIPPING STOPPING MAINTENANCE		±10
25	MAXIMUM TIPPING STOPPING SUPPORT		±10
26	MAXIMUM TIPPING STOPPING TRAINING		±10
27	MAXIMUM TIPPING STOPPING DOCUMENTATION		±10
28	MAXIMUM TIPPING STOPPING COMPLIANCE		±10
29	MAXIMUM TIPPING STOPPING CERTIFICATION		±10
30	MAXIMUM TIPPING STOPPING INSPECTION		±10
31	MAXIMUM TIPPING STOPPING TESTING		±10
32	MAXIMUM TIPPING STOPPING EVALUATION		±10
33	MAXIMUM TIPPING STOPPING IMPROVEMENT		±10
34	MAXIMUM TIPPING STOPPING INNOVATION		±10
35	MAXIMUM TIPPING STOPPING RESEARCH		±10
36	MAXIMUM TIPPING STOPPING DEVELOPMENT		±10
37	MAXIMUM TIPPING STOPPING DEPLOYMENT		±10
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98	MAXIMUM TIPPING STOPPING TRAINING		±10
99	MAXIMUM TIPPING STOPPING DOCUMENTATION		±10
100	MAXIMUM TIPPING STOPPING COMPLIANCE		±10

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. ALL DIMENSIONS ARE APPROXIMATE. ALWAYS CONSULT THE USER MANUAL FOR THE LATEST DIMENSIONS AND SPECIFICATIONS.



**100+ CUSTOMER TOUCH POINTS**



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