

J Series

1.3 / 1.5 / 1.6 / 1.8 / 2.0 T
Electric Three-wheel Forklift

Standard Feature

- Front wheel & Rear wheel pneumatic tyres
- High capacity storage battery
- Emergency disconnect switch
- Rubber floor mat
- Grammer high elastic seat
- 2 Spools control valve
- Locked spring gas
- Front combined lamp
- 3 meters 2-stage mast
- Adjustable steering column
- Rearview mirror
- Drive, lift, steering controlled
- Rear combined lamp
- Beeper
- Toolbox and file folder
- Hour meter, self-diagnose indicator

Optional Feature

- AC drive system
- 3 or 4 spools control valve
- 4.3-6 meters 3-stage mast
- 2.5-4.5 meters 2-stage mast
- With attachment
- Option fork
- High capacity battery
- Spread carriage



CE CERTIFICATE



ISO14001: 1996



ISO9001: 2000



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浙江杭叉工程机械股份有限公司
ZHEJIANG HANGCHA ENGINEERING MACHINERY CO.,LTD.

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durable, clean: **HYDRAULICS**
 simple, comprehensive: **PANEL**
 wet disc, progressive: **BRAKES**
 optimised, powerful: **BATTERIES**

CHASSIS & HYDRAULICS

A fully enclosed chassis frame houses the drive motors. The hydraulic and drive components are protected against dirt and water.

For long, leak-free service it is critical to keep the hydraulic system clean.

The J series has high quality cylinders and hard chrome burnished and polished rods to reduce seal wear, for long life and minimum fluid contamination.

To keep the fluid clean the J has a full-flow low pressure filter on the return line.

Cleanliness minimises seal and pump wear and keeps the control valve in good, trouble free, condition.

Brakes

The J series three-wheel truck has three independent braking systems:

- Regenerative braking system
- Hydraulic wet disc brake system
- Toggle-type parking brake

FRAME

Vertical sides help the driver work safely with less damage, even in an area with low-level obstructions.

Thick chassis plates resist distortion, reduce damage and minimise refurbishment costs.

The wide mast and low console give an excellent view of the forks and the way ahead.

Well positioned lights ensure optimum vision to both the front and back-essential in containers.

Much attention has been given to the carriage design, with an integral full-vision side-shift. The cleverly machined structure of tensile steel bars and a double-ended hydraulic cylinder gives the max view of the load and forks, coupled with variable speed side-shift.



The wide mast, low scuttle and high seating position gives the operator an excellent view of the forks and of the way ahead-reducing load damage and accidents.

An integral full-vision side-shift.

BATTERY CONTROL

Over 50% of all electric lift trucks bought today are three-wheelers and they have greatest range of applications, from running for just 1/2 an hour at a time to working three full shifts a day.

The J series uses only the best European control systems. Smaller trucks with less demanding work patterns are fitted with market leading ZAPI DC SEM controllers.

For heavier-duty trucks it makes sense to select the Danaher AC controllers which optimise battery power, particularly helpful on ramps and long runs as well as high lifts.



Full accessible 48 volt batteries with 400-600 Ah capacity are controlled by either ZAPI SEM or Danaher AC control systems.

DRIVER'S COMPARTMENT

The J series' design pays great attention to the driver zone: a strong grab handle is provided, with a large low step for easy access.

A clear footwell with well-placed pedals gives plenty of room for large feet and helps the driver work safely. The simple, concise instrument panel is less distracting yet still offers a comprehensive warning system.

Hydraulic levers can be mounted on either the scuttle or beside the battery, allowing access from either side.

The standard Grammer GS12 semi-suspension seat is a clear benefit for longer shifts or mature operators and gives comfortable support.



Comfortable seat can be upgraded to a luxury semi-suspension version.

Safe and easy access is assured by a large, non-slip step and grab handle.

The adjustable steering Column ensure a comfortable working position.



DRIVE TRAIN

The incorporation of ZF® developed components, including finely engineered helical gears, assures low noise, high quality and a longer service life.

For heavy-duty application the AC system and brushless motors with minimum servicing is ideal for long cycles, ramps and high lifts.

SEM drive motor provides more advanced control features. The ZAPI controller control the traveling, lifting, tilting and steering action.

Twin DC or AC motors are readily accessible from either the front or above, minimising service time.



Front-wheel drive through two drive motors incorporated in a compact axle. DC or AC motors are used, depending on truck size and workloads.

Access to the state-of-the-art controllers is easy at waist height, helping to reduce servicing time



STEERING

The "On - demand" hydraulic power steering, combined with drive-motor system, gives superb maneuverability with low noise level and low energy consumption . The low steering force required, further enhances operator comfort.



simple. Easy: **SERVICE**

DC or AC: **MOTORS**

state of the art: **ELECTRONICS**

strong, wide, clear view: **MASTS**

ELECTRONICS

DC or AC - the choice is yours.

The ultimate in DC control is the ZAPI high frequency MOSFET microprocessor, coupled with separately excited motors (SEM) to give the truck smooth can be imposed and more than 30 performance characteristics can be adjusted. An excellent system for smaller trucks with a medium workload.

AC technology is better suited to heavy-duty applications. The use of current is optimised and AC motors are brushless, which minimises servicing. Motors can be very well protected against the water and dust. Roll-back is almost eliminated and higher travel speeds are attainable.

Both systems are fully adjustable to suit the load, the working area and the operator. Inbuilt diagnostics record intermittent faults and service requirements reducing expensive service time.

The choice is between ZAPI DC control originating in Italy or Danaher AC systems produced in Sweden.



More than thirty performance parameters can be adjusted to suit the type of load, congestion of the working area and skill of the driver.

INTRODUCTION

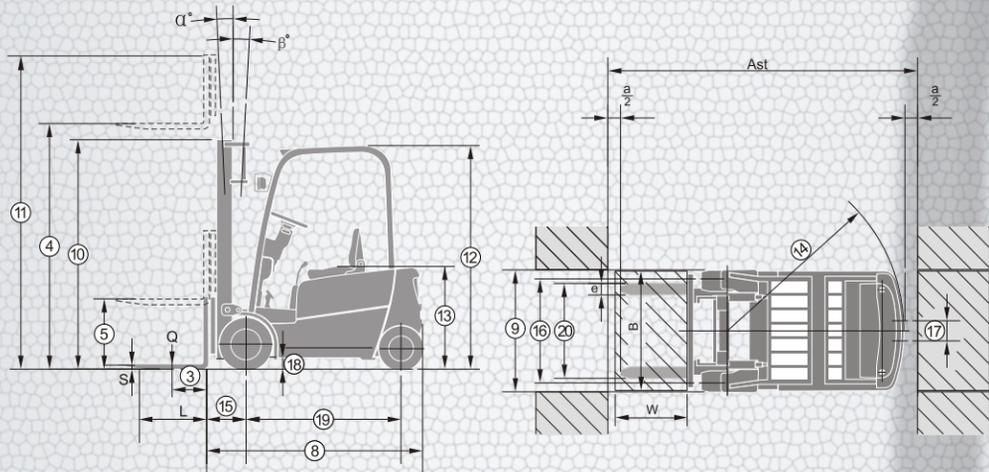
The distinctive features of the new J series electric three-wheel forklift are the following :

- Versatility of use due to compact design and minimal operating space requirements. Compact dimensions combined with superb maneuverability.
- High stability, both when stationary and cornering, due to long wheelbase, low centre of gravity and wide tyres.
- Economy of operation, resulting from minimized maintenance costs, e.g. Low-wear brakes.

F Or more than 30 years, **ZHEJIANG HANGCHA ENGINEERING MACHINERY CO., LTD.** Has played a leading role in the manufacture and production of Chinese forklift industry . We constantly strive to develop and incorporate the latest advances in forklift design and technology to ensure that our products provide an optimum level of performance, all the time. Our new generation J series of forklifts truly exemplifies this commitment to excellence.

1.3-2.0 t Electric Three-wheel Forklift Specification

DIMENSIONS



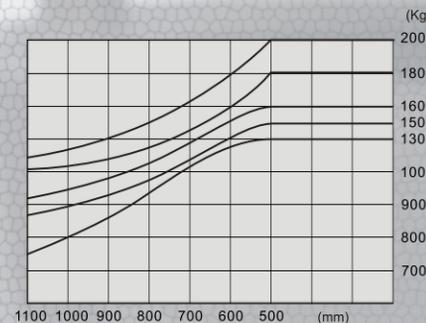
a = 200 mm safety clearance
 $AST = a + (14) + (15) + \sqrt{W^2 + (B/2)^2}$

		SFC																
No.	Manufacturer																	
Specification	1 Model																	
	2 Rated capacity	Kg	1300			1500			1600			1800			2000			
	3 Load centre	mm	500															
	4 Lifting height	mm	3000															
	5 Free lifting height	mm	150			150			150			150			150			
	6 Fork size	s×e×l	40×100×900			40×100×900			40×100×900			40×100×900			40×100×900			
	7 Tilting angle	F/B (α° / β°)	6.5 / 6.5															
Dimensions	8 Length (to fork face)	mm	1792			1792			1900			1900			2012			
	9 Width	mm	1060															
	10 Overall Dimension	Height when mast lowered	mm	1995														
		Height when mast lifting	mm	3945														
	11 Height to safeguard	mm	1960															
	12 Height seat	mm	930			930			930			930			930			
	14 Turning radius	Min.	1440															
	15 Overhang	mm	355															
	16/17 Thread(Front/Rear)	mm	902 / 175			902 / 175			902 / 175			902 / 175			915 / 175			
	18 Ground clearance	Min.	90															
	19 Wheelbase	mm	1250			1250			1358			1358			1465			
20 Fork spread	Min. / Max.	200 / 1000																
	Working aisle width	mm	3161			3161			3271			3271			3380			
22 with pallet (Ast)	mm	3260			3260			3370			3370			3480				
Performance	23 Speed	Travel (Laden)	km/h	13	14	14	13	14	14	13	14	14	13	14	14	12	13	13
		Travel (Unladen)	km/h	13	14	14	13	14	14	13	14	14	13	14	14	12	13	13
	24 Lifting	Lifting (Laden)	mm/s	300			290			280			270			250		
		Lifting (Unladen)	mm/s	450			440			440			430			400		
	27 Gradeability	Laden	%	16	20	20	15	20	20	15	20	20	15	18	18	12	15	15
		Unladen	%	20	20	20	20	20	20	20	20	20	15	20	20	13	18	18
29 Service weight	Include battery box	Kg	2760			2950			3020			3080			3370			
30 Tyre	Front×2	18×7-8																
	Rear×2	15×4.5-8																
Driven	32 Motor	Driven motor×2	kw	5.5×2	4.6×2	4.6×2	5.5×2	4.6×2	4.6×2	5.5×2	4.6×2	4.6×2	5.5×2	4.6×2	4.6×2	5.5×2	4.6×2	4.6×2
		Pump motor	kw	8.6			8.6			8.6			8.6			8.6		
	34 Battery	Standard	V/Ah	48 / 400			48 / 400			48 / 500			48 / 500			48 / 600		
Optional (Ceil)		V/Ah	48 / 440			48 / 440			48 / 550			48 / 550			48 / 660			
36 Controller	Type	MOSFET																
	Drive system		DC	AC	AC													
	Manufacturer		ZAPI	ZAPI	DANAHER													
39 Operating pressure for attachment	Mpa	14.5			14.5			14.5			14.5			14.5				

- Special lifting height available.
- Attachment available.
- The specification in the table are for standard models only. For further information please contact us.
- Specification are subject to change without notice.
- Note: JD1 series means AC drive system.

1.3 / 1.5 / 1.6 / 1.8 / 2.0 t J serie mast

LOAD CHART



Type	Model	Mast fork height	Overall height		Free lift		Tilt range		Capacity					
			Lowered	Extended		Extended		FED	RED	Load capacity at 500 mm				
				With backrest	Without backrest	With backrest	Without backrest			1.3T	1.5T	1.6T	1.8T	2.0T
Wide view 2-stage mast	S16MX	2500	1745	3445	3065	145	145	6.5	6.5	1300	1500	1600	1800	2000
		2700	1845	3645	3265	145	145	6.5	6.5	1300	1500	1600	1800	2000
		3000	1995	3945	3565	145	145	6.5	6.5	1300	1500	1600	1800	2000
		3300	2145	4245	3865	145	145	6.5	6.5	1300	1500	1600	1800	2000
		3500	2245	4445	4065	145	145	6.5	6.5	1300	1500	1600	1800	2000
		3600	2295	4545	4165	145	145	6.5	6.5	1300	1500	1600	1800	2000
		4000	2545	4945	4565	145	145	3.5	5	1300	1500	1600	1800	2000
		4300	2710	5245	4865	145	145	3.5	5	1200	1400	1500	1700	1900
Wide view full free 3-stage mast	S16NX	4500	2820	5445	5065	145	145	3.5	5	1100	1300	1400	1600	1800
		4300	2010	5245	4905	1100	1415	3.5	5	1200	1400	1500	1700	1900
		4500	2075	5445	5105	1170	1480	3.5	5	1100	1300	1400	1600	1800
		4800	2175	5745	5405	1270	1580	3.5	5	1000	1200	1300	1500	1550
		5000	2240	5945	5605	1340	1645	3.5	5	950	1150	1250	1450	1500
		5500	2410	6445	6105	1500	1815	3.5	5	850	1050	1150	1200	1300
6000	2625	6945	6625	1670	2010	3.5	5	750	950	1050	1100	1200		

Note: With side-shift, load capacity subtract 200Kg.