

# **LIFTSTAR<sup>®</sup>**

Make Your Job Easier!

**Fork Over Stacker**

**WS93-14/16 WS95-16 WS35-16**





## Fork Over Stacker

**WS93-14/16 WS95-16 WS35-16**

**WS** series fork-over stackers are comfortable and high secure electric stackers with duplex mast , triplex mast and maximum lifting height up to 5800mm. Lifting capacity 1400KGS and 1600KGS, equipped with Liftstar-Made EPS, AC drive system and floating system. Standard equipped with 280 Ah lead-acid sideway battery. If you are looking for products for heavy duty loading-unloading, heave duty pallet stacking, loading-unloading in container truck, or high-racking pallet stacking . WS93/WS95/WS35 will be your best choice.





**High quality profile steel makes lifting more smoothly**





# Liftstar Advantages

## Reliability

### ■ Production

- Injection mold cover, high precision, good appearance
- CNC machine ensures high precision of the components, including pin roll, connecting rod, frame. etc.
- Chassis lifetime up to 10 years.



### ■ International Famous Brand Components

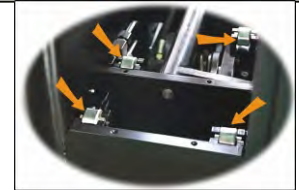
- STELLANA wheel
- HEICO fastening piece
- TORCH battery
- ALBRIGHT contactor
- HONEYWELL sensor
- LIFTSTAR designed&produced charger with less than 0.1% failure rate.



## Performance

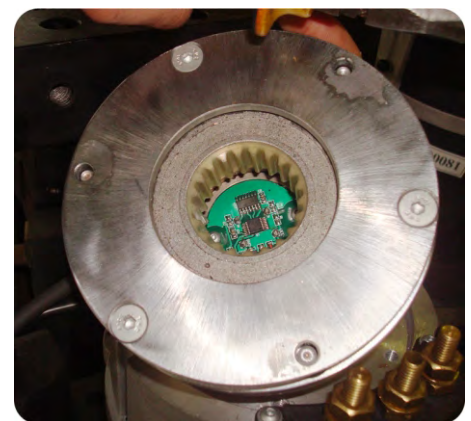
### ■ EPS System

- LIFTSTAR designed EPS system, tested by the market for 3 years, high reliability
- High efficiency, low energy consumption, low noise



### ■ AC driving system

- External encoder, easy for replacement
- Brushless, regenerative brake
- Powerful AC driving motor



### ■ Five-point chassis for optimum stability and control



# Liftstar Advantages

## ■ Two solenoid valves

3 different lowering speed is available

## ■ Electromagnetic brake

## ■ System Self-protection

Double controller can real-time protect the vehicle control system from circuit overvoltage, under voltage, over current, excess temperature, Short circuit.

## ■ Quality control

- 48hours 100% inspection of EPS controller, Charger, Steering motor, Sensor.
- Full Quality Control before delivery including Noisy, Driving, Lifting and Welding inspection.



## Ergonomics

- Tiller head designed for Maximum operator comfort
- Controls positioned to allow operation with either hand
- EPS system provides optimum directional control at any speed



## Safety

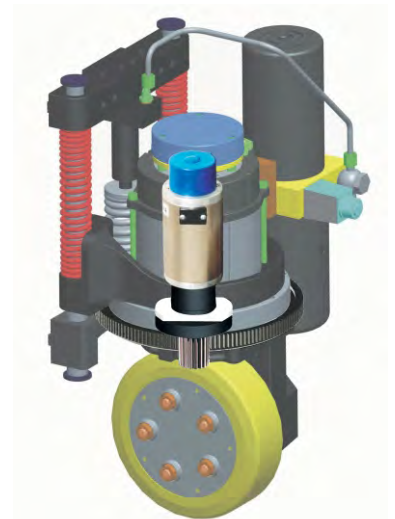
- Automatic slow down when the mast height reaches 1.5m
- Automatic slow down for corner sharp turn
- Emergency reversing button: enhance operation safety

- Triplex mast with free lifting cylinder. High quality profile steel makes lifting more smoothly



- Floating structure of driving unit

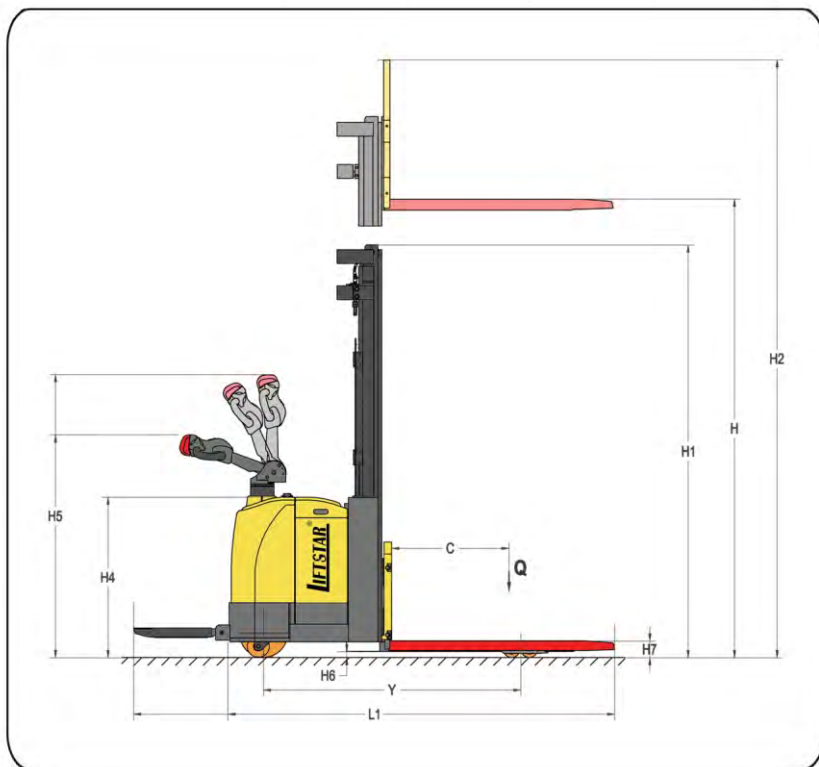
- Prevents wheel slip
- Strong spring works for unloaded situation and reinforcing cylinder assists to increase traction according to loading weight.





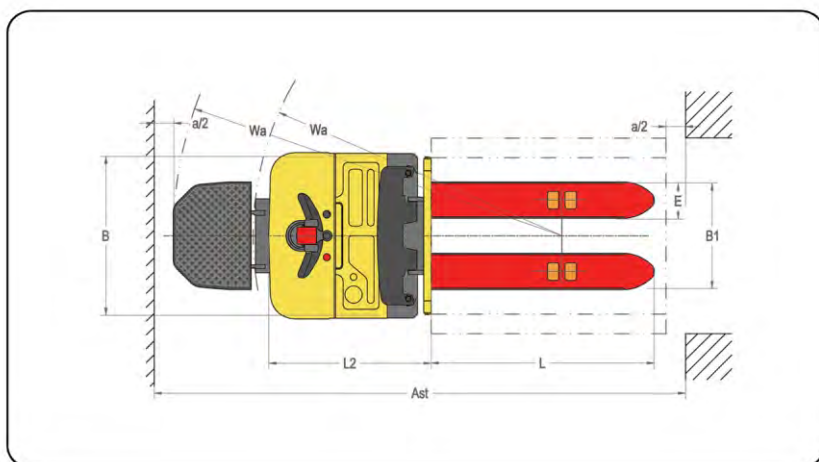
# Straddle Leg Stacker

WS93-14/16



## Truck dimensions

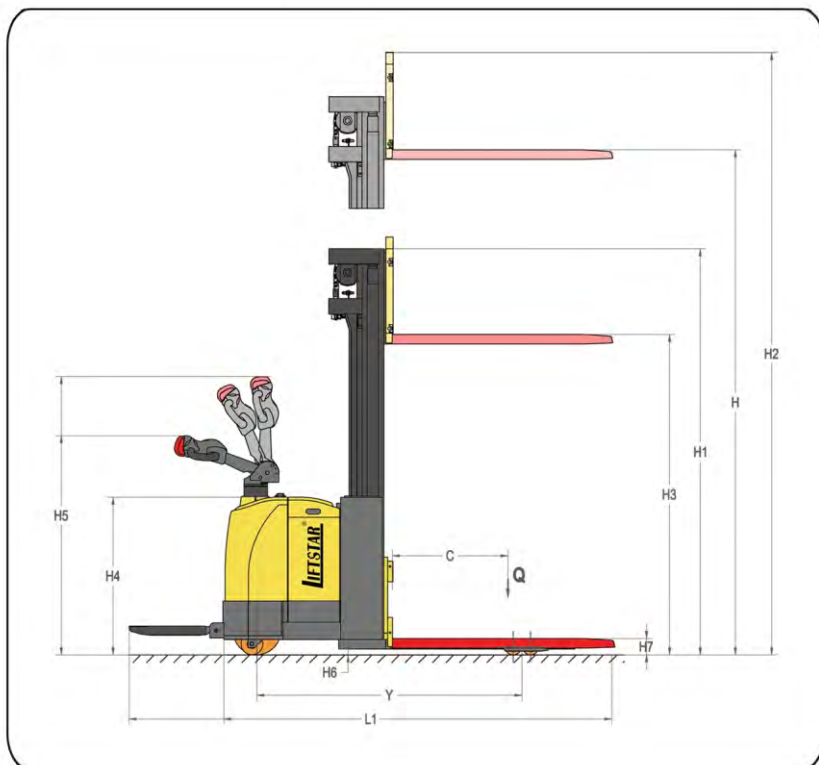
Note: Specifications are effected by the condition of the vehicle and how it is equipped, as well as the nature and condition of the operating area. If these specifications are critical, the proposed application should be discussed with your dealer.



Notice: Care must be exercised when handling elevated load. When the carriage and/or load is elevated, truck stability is reduced. Operators must be trained and adhere to the instructions contained in the Operating Manual.

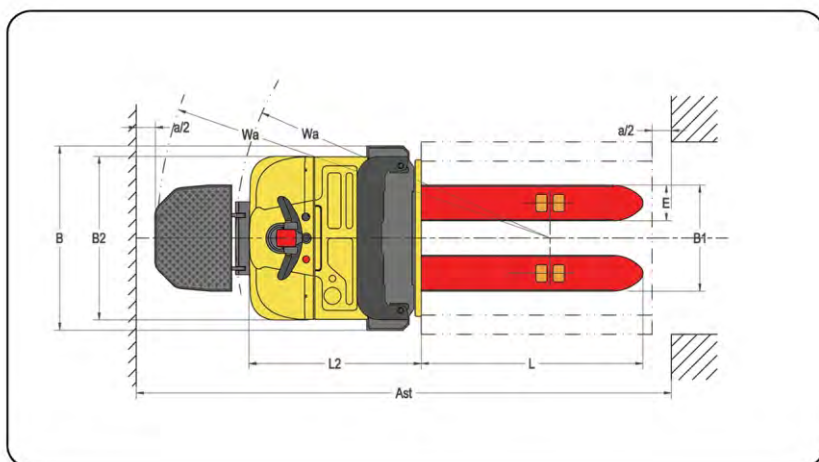
# Fork Over Stacker

## WS95-16



### Truck dimensions

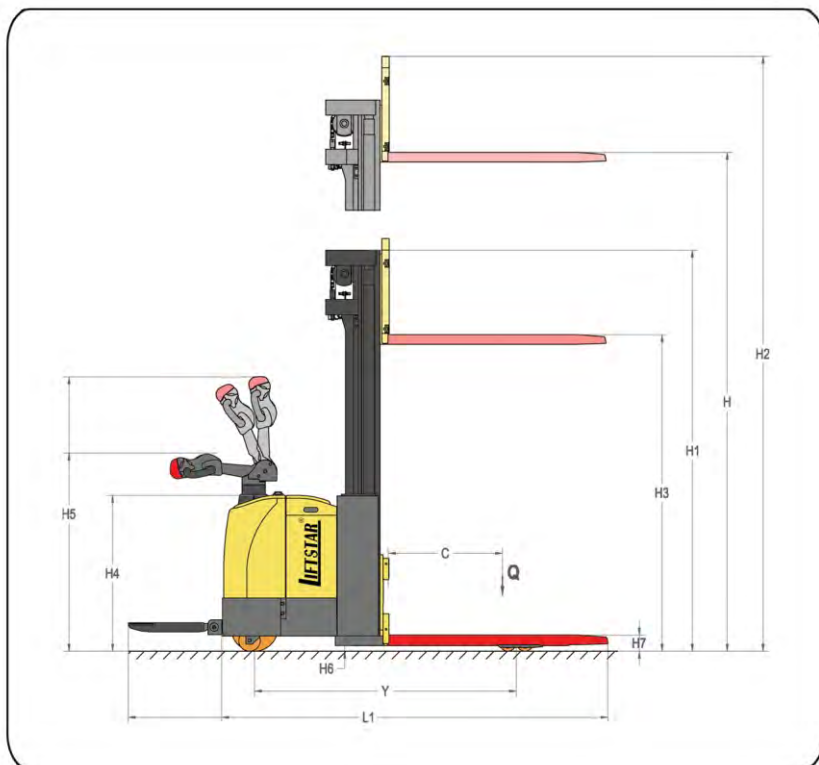
Note: Specifications are effected by the condition of the vehicle and how it is equipped, as well as the nature and condition of the operating area. If these specifications are critical, the proposed application should be discussed with your dealer.



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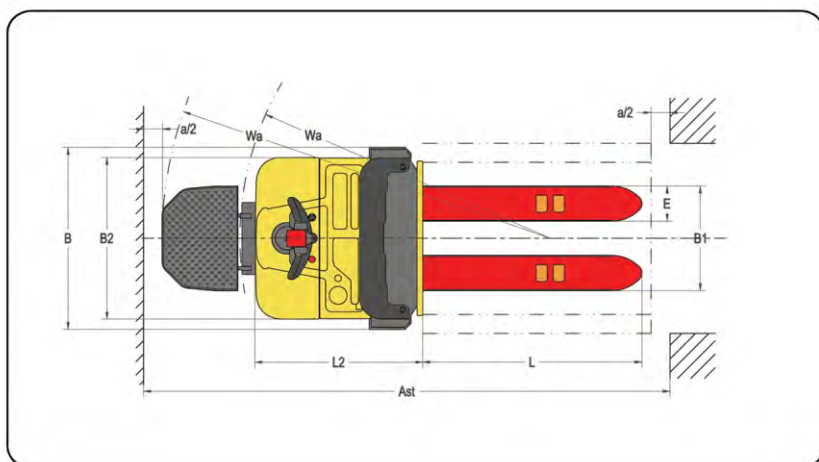
# Fork Over Stacker

## WS35-16



### Truck dimensions

Note: Specifications are effected by the condition of the vehicle and how it is equipped, as well as the nature and condition of the operating area. If these specifications are critical, the proposed application should be discussed with your dealer.



Notice: Care must be exercised when handling elevated load. When the carriage and/or load is elevated, truck stability is reduced. Operators must be trained and adhere to the instructions contained in the Operating Manual.



# Fork Over Stacker

## Specification Data

characteristics		Model		WS93-14/16	WS95-16	WS35-16
	1.1		Mast Type		Duplex	Triplex & free lift
	1.2	Q	capacity	kg	1400/1600	1600
	1.3	C	load center	mm	600	
	1.4		operator type		walkie(rider option)	
	1.5		EPS (electric power steering)		standard equipped	

specifications	2.1	H	optional lifting height	mm	2500/3000/3300/3500/4000	4000/4500/4750/5000	5300/5500/5800
	2.2	H <sub>3</sub>	Freelift height(Lifting height 2500/3000/3300)	mm		1520/1620/1670/1770	2074/2134/2234
	2.3	H <sub>7</sub>	lowered height of fork	mm	85		
	2.4	B <sub>1</sub>	overall fork width	mm	540(maximum 685)		650/685
	2.5	L	fork length	mm	1150		
	2.6	E	fork width	mm	185		
	2.7	Wa	minimum turning radius	mm	1580	1630	
	2.8	AST	minimum aisle width	mm	2180	2230	
	2.9	H <sub>6</sub>	minimum ground clearance	mm	30		

performance	3.1		minimum traveling speed	laden	km/h	3/6	
				unladen	km/h	3.5/6.5	
	3.2		minimum lifting speed	laden	m/s	0.13	
				unladen	m/s	0.23	
	3.3		minimum lowering speed	laden	m/s	0.13	
				unladen	m/s	0.23	
	3.4		gradeability	laden	%	5	
				unladen	%	6	

weight	4.1		service weight without battery	kg	970/1018	1344	1546
	4.2		service weight with battery	kg	1204/1252	1578	1780

chassis	5.1	L <sub>1</sub>	overall length(3m standard)	mm	2050/2470(with platform)	2105/2525(with platform)	
	5.2	B	overall width	mm	856	957	
	5.3	H <sub>5</sub>	Height of tiller arm in drive position min./max.	mm	1140/1450		
	5.4	L <sub>2</sub>	rear body length	mm	830	885	
	5.5	B <sub>2</sub>	rear body width	mm	850		
	5.6	H <sub>4</sub>	rear body height	mm	820		
	5.7	B <sub>3</sub>	handle width	mm	430		
	5.8	H <sub>2</sub>	mast extend height	mm	3000/3500/3800/4000/4500	4500/5000/5250/5500	5800/6000/6300
	5.9	H <sub>1</sub>	mast lower height	mm	1765/1980/2135/2285/2500	1900/2085/2135/2235	2520/2590/2690

# Fork Over Stacker

wheel	6.1		wheel type front/rear		PU	
	6.2		wheels		1*Driven wheel,2*Universal wheel,4*Front wheel	
	6.3	D <sub>2</sub>	dimension of driven wheel	mm	Φ 248*75	
	6.4	D <sub>1</sub>	dimension of load wheel	mm	Φ 84*58	
	6.5	D	dimension of universal wheel	mm	Φ 115x55	
	6.6	Y	wheel base	mm	1325	1375

driving system	7.1		brake type		electromagnetic	
	7.2		traveling motor	kw	1.5 AC	
	7.3		lifing motor	kw	3.0 DC	
	7.4		voltage	v	24	
	7.5		battery capacity/type	Ah	280Ah/industry	
	7.6		maximum battery box size(L*W*H)	mm	650*248*548	
	7.7		control system		CURTIS 1230-200A	

Right reserved for technical changes and improvements.





# Fork Over Stacker

## Option lifting height, fork size

The following lifting height is the option we have made before, you can communicate with us if you have special requirement

WS93-14 (with Duplex mast)					
	lifting height mm(H)	mast lower height mm(H1)	Free lift mm(H3)	Height of mast extended mm(H2)	fork size mm(B1*L)
Optional lifting height and fork size	1400.00	1185.00	100.00	1900.00	520×980
	1600.00	1365.00	100.00	2100.00	520×1150
	1700.00	1365.00	100.00	2200.00	550×980
	2000.00	1535.00	100.00	2500.00	550×1000
	2500.00	1765.00	100.00	3000.00	550×1070
	2600.00	1785.00	100.00	3100.00	550×1150
	2700.00	1865.00	100.00	3200.00	550×1200
	2800.00	1880.00	100.00	3300.00	600×1000
	2900.00	1930.00	100.00	3400.00	600×1070
	3000.00	1980.00	100.00	3500.00	600×1150
	3050.00	2005.00	100.00	3550.00	600×1220
	3300.00	2135.00	100.00	3800.00	600×1400
	3350.00	2135.00	100.00	3850.00	600×1500
	3500.00	2285.00	100.00	4000.00	650×1070
	3600.00	2335.00	100.00	4100.00	650×1150
	4000(height limited)	2500.00	100.00	4500(height limited)	650×1220
	4000(no height limited)	2535.00	100.00	4500(no height limited)	650×1500
					685*1000
					685*1150
					685*1220
					685*1600

WS93-16 (with Duplex mast)					
	lifting height mm(H)	mast lower height mm(H1)	Free lift mm(H3)	Height of mast extended mm(H2)	fork size mm(B1*L)
Optional lifting height and fork size	1400.00	1185.00	100.00	1900.00	540×1150
	1600.00	1365.00	100.00	2100.00	550×980
	1700.00	1365.00	100.00	2200.00	550×1070
	2500.00	1765.00	100.00	3000.00	550×1150
	2600.00	1785.00	100.00	3100.00	550×1220
	2700.00	1865.00	100.00	3200.00	550×1300
	2800.00	1880.00	100.00	3300.00	560×1150
	2900.00	1930.00	100.00	3400.00	560×1220
	3000.00	1980.00	100.00	3500.00	560×1300
	3050.00	2005.00	100.00	3550.00	570×1220
	3300.00	2135.00	100.00	3800.00	600×1150
	3350.00	2135.00	100.00	3850.00	600×1220
	3500.00	2285.00	100.00	4000.00	600×1300
	3600.00	2335.00	100.00	4100.00	650×1000
	4000.00	2500.00	100.00	4500.00	650×1070
					650×1150
					650×1220
					650×1300
					685*1150
					685*1220
					685*1300

WS95-16 (with Triplex mast)					
	lifting height mm(H)	mast lower height mm(H1)	Free lift mm(H3)	Height of mast extended mm(H2)	fork size mm(B1*L)
Optional lifting height and fork size	3700.00	1800.00	1335.00	4200.00	520×1150
	3900.00	1900.00	1448.00	4400.00	550×980
	4000 - 4200	1985.00	1520.00	4500-4700	550×1000
	4500.00	2085.00	1620.00	5000.00	550×1070
	4700/4750	2135.00	1670.00	5200-5250	550×1150
	5000.00	2235.00	1770.00	5500.00	550×1220
					550×1300
					560×1150
					570×1150
					600×950
					600×1070
					600×1150
					600×1220
					650×1000
					650×1070
					650×1150
					650×1220
					650×1300
					685*1000
					685*1150
					685*1220
					685*1300

WS35-16 (with Triplex mast)					
	lifting height mm(H)	mast lower height mm(H1)	Free lift mm(H3)	Height of mast extended mm(H2)	fork size mm(B1*L)
Optional lifting height and fork size	5300.00	2520.00	2074.00	5800.00	685*1000
	5500.00	2590.00	2134.00	6000.00	685*1150
	5800.00	2690.00	2234.00	6300.00	685*1220



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