

# Engineering built smarter. Solutions built to last.

Tuboshu delivers innovative, sustainable engineering built for Africa. Backed by decades of expertise, we design adaptive, high-performance solutions that solve real operational challenges. Our commitment to quality drives every project, supported by a trusted network for maintenance, technical assistance, and ongoing after-sales service.

## Elevate Your Power



**TUBOSHU**

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Certain specification(s) are based on engineering calculations and are not actual measurements. Specification(s) are provided for comparison purposes only and are subject to change without notice. Specification(s) for your individual Tuboshu equipment will vary based on normal variations in design, manufacturing, operating conditions, and other factors. Pictures of Develon units may show other than standard equipment.

**TUBOSHU**



ELECTRIC FORKLIFT **7**  
**TF120-180E**

# TECHNICAL SPECIFICATION

CHARACTERISTICS		TUBOSHU				
Manufacturer						
Model		TF120E	TF150E	TF160E	TF180E	
Configuration Number		TUHECPD120UK	TUHECPD150UK	TUHECPD160UK	TUHECPD180UK	
Rated capacity	Q t	12	15	16	18	
Load center distance	c mm	900	600	600	600	
Max. lifting speed (laden/unladen)	mm/s	320/340	320/340	320/340	320/340	
Max. travel speed (laden/unladen)	km/h	17/19	17/19	17/19	17/19	
Gradeability (laden)	%	25	25	25	20	
Wheelbase	y mm	1475	1475	1660	1660	
DIMENSION PARAMETER		TF120E	TF150E	TF160E	TF180E	
Mast Tilt Angle	L1 mm	6705	6705	6705	6705	
Height (Mast Lowered)	B mm	2560	2560	2560	2560	
Free lifting height	H mm	3365	3365	3365	3365	
Lifting Height (Standard)	L5 mm	3250	3250	3250	3250	
Max Height Extended (With Backrest)	H2 mm	260	260	260	260	
Height of Overhead Guard	H6 mm	1970	1970	1970	1970	
Seat Height Relating to SIP (to Ground)	R2 mm	4500	4500	4500	4500	
Towing Coupling Height	W1 mm	1888	1888	1888	1888	
Overall Length with Fork	W2 mm	2120	2120	2120	2120	
Overall Length without Fork	H1/H5 mm	3365/4865	3365/4865	3365/4865	3365/4865	
Overall Width	H3 mm	3000	3000	3000	3000	
Fork Carriage According to ISO2328	α/β °	6/12	6/12	6/12	6/12	
Fork Size (thickness x width x length)	mm	1820×200×85	1370×200×85	1370×200×85	1370×200×85	
Distance Across Fork-Arms MAX/MIN	mm	500-2370	500-2370	500-2370	500-2370	

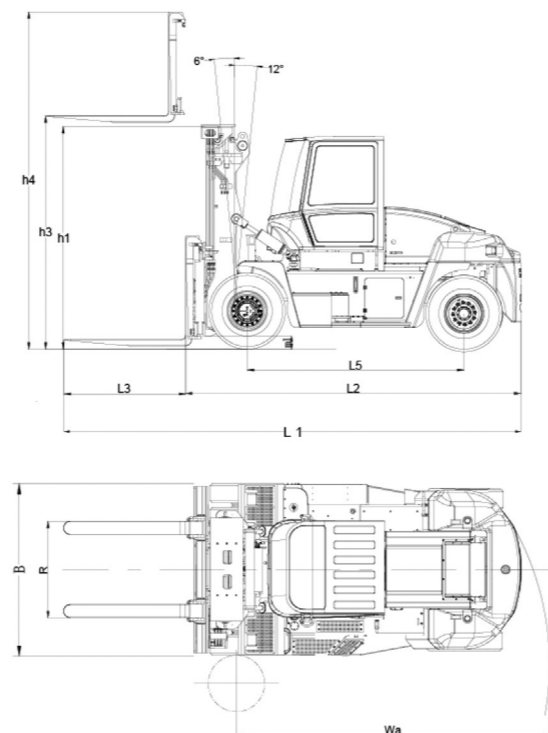
## LITHIUM BATTERY

BATTERY BRAND	PENCHANG
VOLTAGE/CAPACITY	531.3 V / 302 Ah
TF120E	o
TF150E	o
TF160E	o
TF180E	o

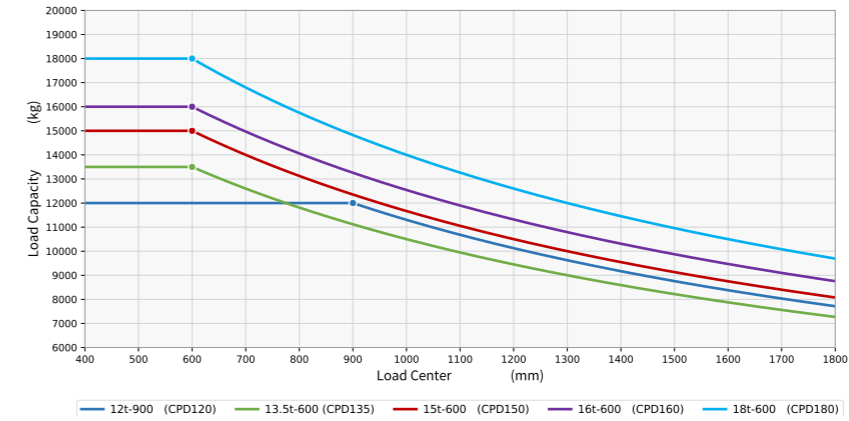
## CHARGER

Huawei 120KW / 750V	X
Huawei 60KW / 750V	X

"x" optional | "o" standard



# TECHNICAL SPECIFICATION



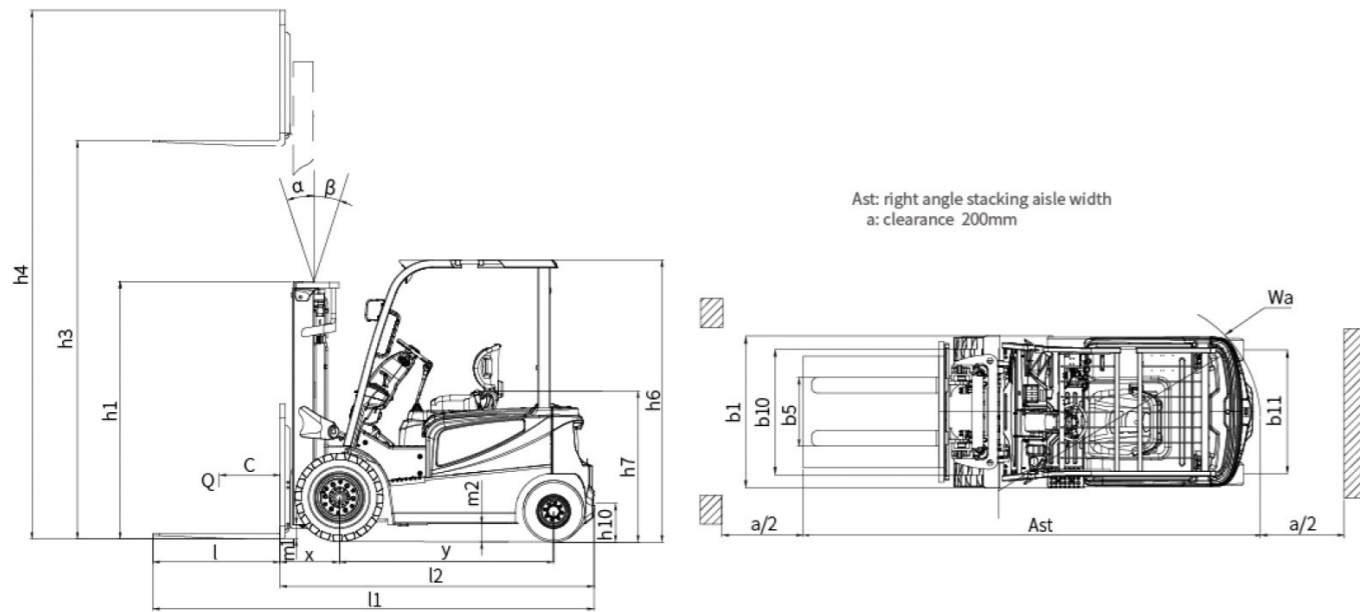
**Note :** The vertical axis stands for load capacity and the horizontal axis stands for load center which is calculated from the front of the fork. The base point of the standard load refers to the center position of the cube with 1000mm length of side. When mast is tilted forward, non standard fork usage or load with over wide goods, load capacity will be reduced. Different load capacity in different load center can be known in time through load chart

Mast Model	Max Lift Height (mm)	Load Capacity (kg)					Mast Overall Height (mm)	Tilt Angle α/β (°) Forward	Tilt Angle α/β (°) Backward
		120-180T	120 T	150 T	160T	180T			
M300	3000	12000	15000	16000	18000	3365	6°	12°	
M350	3500	12000	15000	16000	18000	3450	6°	12°	
M400	4000	12000	15000	16000	18000	3700	6°	12°	
M450	4500	12000	15000	16000	18000	3950	6°	12°	
M500	5000	12000	15000	16000	18000	4200	6°	6°	
M550	5500	11000	14000	15000	17000	4450	3°	6°	
M600	6000	10000	13000	14000	16000	4700	3°	6°	
M650	6500	9000	12000	13000	15000	4950	3°	6°	

OPTIONAL CONFIGURATION			
Wide-view mast	Vehicle speed-limit function	LCD display	Backup motor start control
Standard fork	FICS information & vehicle-lock	Vehicle mode settings (Efficient / Economy)	Whole-vehicle thermal management
Turn indicator lamps	Hydraulic oil level gauge	Hydraulic fork-positioner	Lithium battery smart fire-suppression
Rear-view mirror	4-section multi-way valve	Electric horn	Aerospace-style control joystick
Front combination lamp	Tilt circuit self-locking valve	Heating & cooling A/C	Electric-proportional variable system
Rear combination lamp	Full-hydraulic power steering	Tilting cab	Patterned durable tyres
Rotating warning beacon	Hydraulic circuit oil filter	Visual reversing radar	Tilt-adjustable steering column
Reversing buzzer	Fully-suspended seat	Motor speed/torque control	Tow pin
Reversing lamp	Intelligent fleet management system	Loaded-lowering buffer	Onboard tool kit
Idle auto-shutdown			

OPTIONAL CONFIGURATION			
Standard solid tyre	Push-bar / stinger	Tyre pressure monitoring system (TPMS)	Lifting jib / boom
Customer-specified color	Weighing system	Fork sleeve / extension	Pipe/cable carrier lifter
Maintenance reminder	Non-marking tyre	Voice reversing horn	Tyre clamp
Soft-bag clamp	4-section multi-way valve	Rotator attachment	

# TECHNICAL DATA



# MAST PARAMETERS

2-stage standard Mast

2-stage full free mast

3-stage full free mast

Mast Model	Max Lift Height (mm)	Load Capacity (kg)		Height Mast Lowered (mm)	Free Lift w/ Backrest (mm)	Service Weight (kg)		Tilt Angle $\alpha/\beta$ (°)
		1.5 T	1.8 T			1.5 T	1.8 T	
	1.5-1.8 T	1.5 T	1.8 T	1.5-1.8 T	1.5-1.8 T	1.5 T	1.8 T	1.5-1.8 T
ZM200	2000	1500	1800	1495	485	2840	2965	6/8
ZM250	2500	1500	1800	1745	735	2872	2987	6/8
ZM300	3000	1500	1800	1995	985	2906	3021	6/8
ZM330	3300	1500	1800	2145	1135	2928	3042	6/8
ZM350	3500	1500	1800	2245	1235	2943	3058	6/8
ZM370	3700	1500	1800	2345	1335	2955	3070	6/6
ZM400	4000	1500	1800	2545	1535	3002	3118	6/6
ZM425	4250	1500	1800	2670	1660	3022	3137	-
ZM450	4500	1450	1650*1750	2765	1785	3041	3156	-
ZM500	5000	1200*1300	1400*1600	3045	2035	3075	3190	-
ZM550	5500	1000*1250	1100*1550	3345	2385	3136	3251	-
ZM600	6000	800*1200	900*1450	3595	2585	3170	3285	-

Mast Model	Max Lift Height (mm)	Load Capacity (kg)		Height Mast Lowered (mm)	Free Lift w/ Backrest (mm)	Service Weight (kg)		Tilt Angle $\alpha/\beta$ (°)
		1.5 T	1.8 T			1.5 T	1.8 T	
	1.5-1.8 T	1.5 T	1.8 T	1.5-1.8 T	1.5-1.8 T	1.5 T	1.8 T	1.5-1.8 T
ZSM360	3600	1500	1800	1790	785	2954	3069	6/6
ZSM400	4000	1500	1800	1925	920	2978	3093	6/6
ZSM435	4350	1450*1500	1700*1800	2040	1035	3003	3118	6/6
ZSM450	4500	1450*1500	1650*1750	2090	1085	3014	3129	6/6
ZSM470	4700	1400*1450	1600*1650	2160	1155	3010	3145	6/6
ZSM480	4800	1350*1400	1550*1650	2190	1185	3037	3152	6/6
ZSM500	5000	1200*1300	1400*1600	2290	1285	3058	3173	6/6
ZSM540	5400	1000*1250	1100*1550	2415	1410	3084	3199	6/6
ZSM600	6000	800*1200	900*1450	2640	1635	2855	3271	6/6
ZSM650	6500	*1100	*1250	2840	-	3194	3305	-
ZSM700	7000	*900	*950	3025	-	3232	3347	-

# OPTIONAL ITEMS

	MODEL	
BASIC ITEMS	Pneumatic Tyre*	◇
	Solid Tyre	-
	Single Tyre (front wheel)	◇
	Twin Tyre (front wheel)**	-
	Two Piece Valve	◇
	Three or Four Piece Valve	-
	Basic Type (3M Lifting Height)	◇
	Other Type and Other Height Seriesmast***	-
	Standard Series Fork	◇
	Non Standard Series Forks and Attachments	-
	Standard Exterior Color (blue grey + Tuboshu orange)	◇
	Other Exterior Colors (customized)	-
	Turning Speed Limit	-
	Reversing Armrest with Horn Switch	◇
SAFETY ITEMS	Overspeed 5km/h Alarm	-
	Overspeed 8km/h Alarm	-
	Overspeed 10km/h Alarm	-
	Travelling+Lifting+Tilting+Equipped with OPS Function (without lowering)	◇
	Full Set of OPS Functions	-
	Seatbelt Switch	-
	Multi-Way Valve Overload	-
	Dry Powder Fire Extinguisher (0.5kg)	-
	Dry Powder Fire Extinguisher (2kg)	-
	Carbon Dioxide Fire Extinguisher (2kg)	-
	Reversing Buzzer	◇
	Reversing Chinese Speaker	◇
	No Universal Key	-
	With Universal Key	-
	Electronic Lifting Upper Buffer	-
	Central Wide-Angle Rearview Mirror	◇
	Both Side Rearview Mirror+ Centre Wide-Angle Rearview Mirror	-
	Reversing Radar (4 Probes)	-
Reversing Image (1 Camera + 4 Radar Probes)	-	
COMFORT ITEMS	Semi Enclosed Seat	◇
	Fully Suspended Seat	-
	Instrument Panel with 1 USB Interface (5V/1A)	-
	Steering Wheel Starts Steering	-
	Synchronous Steering	-
	Steering Wheel with Handle Ball	◇
	Steering Wheel without Handle Ball	-
	Electric Fan	-
CAB/ WINDSHIELD/ AIR CONDITIONNER/ HEATER	Panel Mounted Cab (including fan & wiper)	-
	Heater	-
	Single Cooling Air Conditionner	-
	Single Cooling Air Conditionner + Heater	-
	Font Windshield (including wiper)	-
	Rear Windshield	-
NON STANDARD OVERHEAD GUARD	Top Windshield (excluding fan)	-
	50 mm Increased of Overhead Guard Height	-
LIGHTS	Overhead Guard (with protective net)	-
	LED rear Work Light x1	-
	Rear LED Red/Blue Spotlight x1	-
	Rear & Lateral Red/Blue Bar Lights	-
	Fixed LED Flashing Warning Light	◇
	Fixed LED Rotary Warning Light	-
	Fixed LED Rotary Buzzer Warning Light	-
OTHERS	Metric Thread	◇
	Tilt Cylinder Jacket	-
	Steering Cylinder Jacket	-
	REMA Power Connector	◇
	Domestic Battery	◇
	GS Battery	-
	HOPPECKE Battery	-
	FAAM Battery	-
	Battery with Automatic Water Replenishment	-
FICS Standard Type (for China)	-	

“◇” Standard “-” Optional | Some non standard options need to be customized.  
Please consult local sales personnel or product development technicians before purchasing.

# Intelligent Security

- Dual core controller
- OPS protection (standard driving OPS / optional hydraulic OPS)
- Hydraulic burst protection, forward tilting self-locking protection
- Electrical multiple protection (short circuit protection, overheat protection, low power protection, sequence protection)
- Parking safety reminder
- Reminder through slow sliding on ramp
- Turning automatic deceleration (optional)

# Convenient Maintenance

- Flexible battery charging mode (can be charged with the truck or replaced)
- Pump, pump motor, controller and other main electrical components are located on the counterweight, which is convenient for maintenance.
- Friendly interface

# HELI Smart Fleet Management System (Domestic Basic Edition)

- Vehicle positioning
- Statistical form
- Remote diagnosis
- Vehicle management
- Remote monitoring
- Identification recognition (optional)
- Maintenance reminder
- Weight management (optional)
- Battery management
- Collision management (optional)

