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ISO14001:2015



ISO9001:2015



HANGCHA trucks conform
to the European Safety
Requirements.

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A Series Electric Forklift Truck

with capacities of 1,000 to 3,500kg

The World of Hangcha



LI-ION POWERED



HANGCHA provides Li-Ion battery (LiFePO₄) with 5 years or 10000 hours warranty.

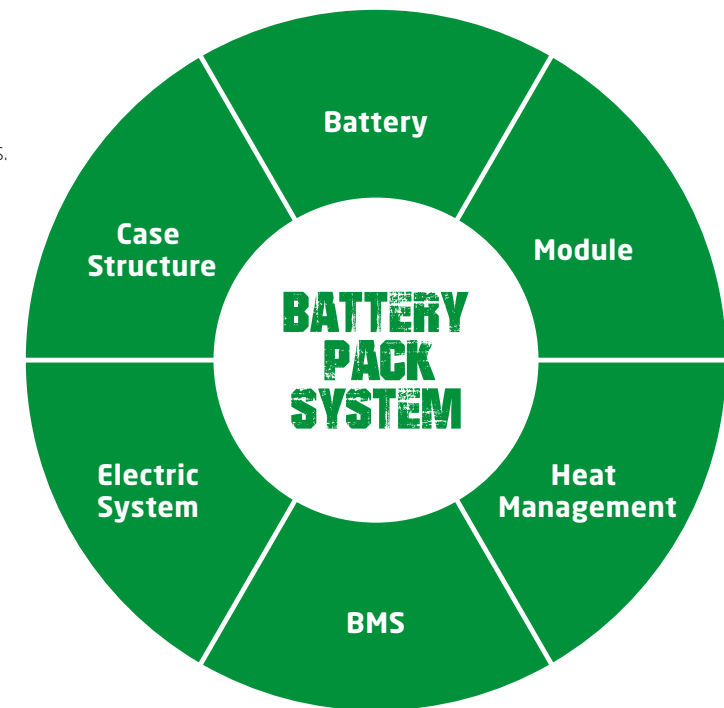


**5 YEARS
WARRANTY**

INNOVATIVE SOLUTIONS NEW POWER NOW

Innovative, reliable lithium-ion technology (Lithium Iron-Phosphate), which are developed jointly by HANGCHA and CATL. Battery cells and modules are from CATL, with reliable quality, exclusively for HANGCHA.

- / We use square lithium iron phosphate batteries and modules used in large quantities by commercial vehicles in mature economies.
- / The module uses an aluminum alloy frame which is sturdy, lightweight and with excellent heat dissipation.
- / Safe and effective: Charging efficiency as high as 98%, thermal runaway temperature 600 °C or above.
- / Adapted to low temperatures: Comes standard with an electrical heating feature , ensuring normal operation in low temperatures.
- / Quick charging: Can charge and operate at the same time, fully charged in 2hours.
- / Long-working: 4000 charging cycles, capacity retention greater than 80%.
- / Maintenance-free: Battery does not require manual maintenance.
- / Green and clean: Pollution-free, zero emissions.



Li-Ion
**2 hours
100%**

Lead-acid batteries
8-10 hours 100%

Rapid charging and opportunity charging ensure continuous availability of vehicles

Li-Ion powered forklifts are always available. They allow for fast full charging or boost charging (100 % charge in 2 hours). They are maintenance free and do not require a battery change when used for multi-shift operations.



TITANS CHARGER

Li-Ion Battery Pack specification

Type		CPD10-AC4-I CPD10-AD2-I	CPD15-AC4-I CPD15-AD2-I	CPD18-AC4-I CPD18-AD2-I	CPD20-AC4-I CPD20-AD2-I	CPD25-AC4-I CPD25-AD2-I	CPD25-ALC4-I CPD25-ALD2-I	CPD30-AC4-I CPD30-AD2-I	CPD35-AC4-I CPD35-AD2-I
Battery voltage, capacity	V/Ah	80/202	80/202	80/202	80/271	80/271	80/404	80/404	80/404
Titans charger		SLC-80100	SLC-80100	SLC-80100	SLC-80100	SLC-80100	SLC-802000	SLC-802000	SLC-802000

Appearance

Applied advanced new designing method, world famous designing company designed, make the eye catchable stream outline of the truck chassis. Small dimension, simple appearance, and metal material applied for the exposed parts, all provide robust construction of the A series.

Power Train



Stability

Advanced parallel layout of drive motor and lower located battery up to chassis bottom provide good stability to the truck.



Intelligent

- / First-class R&D and testing facility.
- / First-class production quality management system.
- / First-class manufacturing facility.
- / First-class environment and control.



Comfortable Operation

Ergonomic

The new designed steering wheel\ new brake system and the easy-to-operate levers provide total handling operation.



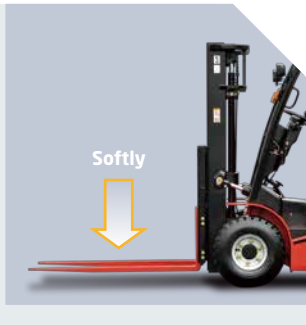
Seat

The extra foot space is provided to reduce operator fatigue significantly. The new wide-open, non-slip step makes getting in and out easy and safe.



Soft landing

In addition to the soft landing system, the soft lifting system is adopted (front lifting cylinders of triplex mast and full free dup-lex mast), as a result, the noise and shock of the mast significantly decreases.



Wide view mast

New designed wide view mast provides better forward view ability.



Advanced

High frequency MOSFET controller provides accurate control of travelling, lifting, and better adjustable performance, and better matches the motor. Regenerative braking, reverse current braking and anti-slide on slop function guarantee the operation safety.

Multi functions big LED dashboard provides running hours, battery power, and self diagnosis functions, and with high accuracy even in bad environment.

Regenerative braking is more energy saving and efficiency during truck's deceleration, direction changing, and driving on downwards slope.

C3/C4 system

CURTIS big LED dashboard. Non-handset Operation



Imported high performance, and new generation AC controller



D2 system

HANGCHA dashboard



Inmotion GEN 6 controller



1. Low center of gravity provides good turning stability, and better operator's driving comfort. 150mm adjustable distance of seat provides better operator's comfort of different operators.
2. Soft landing system is applied for A series. When the forks lower to 60-100mm to ground, the soft landing system is auto operated, and to avoid the forks dashing against the ground. New designed broad view mast provides better forward visibility.
3. Easy to see LED dashboard provides friendly interaction.
4. Low noise, no exhaust emission, and low energy consumption, all meet environment friendly requirement.



Service Ability

Full open battery cover, easy for battery service easy opened counter weight cover, to protect internal controller to avoid water and dust World famous brand electronics are applied in motor controller, contactor, power plug, emergency switch, dashboard, and accelerators.

Overloaded protection system is applied for electronics and hydraulics.

CE certificate is available.



Battery cover with auto lock spring for easy battery service and replacing, and clean the oil tank



Side battery changing solution is applied for heavy and long time application



Big dimension anti-slide rubber pad



Protective roof



Easy opened counterweight cover is to protect the internal controllers to avoid water and dust

Accessory

Standard Features	Options
/ High efficiency AC driving motor	/ Side way battery change (Using pallet truck or trolley)
/ Special for truk's lifting motor	/ Big capacity Chinese made battery
/ Multi-functions dashboard	/ Cold store application
/ Full electronic controlled travelling, lifting and steering	/ High performance import battery
/ Front lighting system, turning indicator, LED combined three colors's rear lights	/ Battery charger
/ Big dimension rubber pad	/ Rear lighting system
/ Sheet meatl stamping made front and rear bottom plate	/ Front dual tyre
/ Sheet metal stamping made left and right cover and battery cover	/ SE tyre
/ Reversing beeper	/ Non-marking tyre
/ Full hydraulic steering	/ Suspension seat with higher OHG
/ Storage box	/ Left and right rear view mirror
/ Soft landing system	/ Reversing hand grip with horn button
/ Standard forks in red	/ Wide fork carriage
/ 3m duplex wide view mast	/ Wide or higher load backrest
/ Tow coupling	/ Other dimension forks
/ Center located rear view mirror	/ Duplex mast with full free lift
	/ Triplex mast
	/ Integrated side shift
	/ Other attachments
	/ OPS
	/ Blue spot light
	/ Other specification on demand

Color Selection

	Color NO. STD. Yellow		Color NO. STD. Red
	Color NO. RAL2000 Yellow Orange		Color NO. RAL6018 Traffic Green
	Color NO. RAL7032 Pebble Grey		Color NO. RAL6029 Mint Green
	Color NO. RAL5018 Truquoise Blue		Color NO. PANTONE 584C Grass Green

A Series 1.0-3.5t Electric Forklift Specification

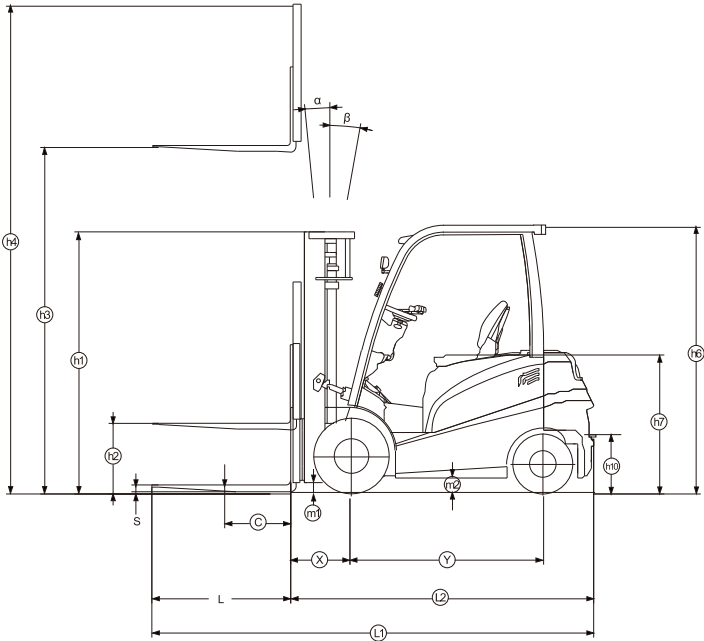
Distinguishing mark	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.								
	1.2	Manufacturers type designation		CPD10-AC3/C4/D2	CPD15-AC3/C4/D2	CPD18-AC3/C4/D2	CPD20-AC3/C4/D2	CPD25-AC3/C4/D2	CPD25-ALC3/C4/D2	CPD30-AC3/C4/D2	CPD35-AC3/C4/D2	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		electric	electric	electric	electric	electric	electric	electric	electric	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		seated	seated	seated	seated	seated	seated	seated	seated	
	1.5	Load capacity/rated load	Q (kg)	1000	1500	1750	2000	2500	2500	3000	3500	
	1.6	Load centre distance	c (mm)	500	500	500	500	500	500	500	500	
	1.8	Load distance, centre of drive axle to fork	x (mm)	406	406	406	455	455	455	475	475	
	1.9	Wheelbase	y (mm)	1380	1380	1380	1485	1485	1625	1625	1625	
Weight	2.1	Service Weight	kg	2940	2940	3090	3880	4180	4380	4850	5300	
	2.2	Axle loading, laden front/rear	kg	3900/540	3900/540	4300/590	5196/684	5920/760	6140/740	7060/790	7950/850	
	2.3	Axle loading, unladen front/rear	kg	1353/1587	1353/1587	1440/1650	1728/2152	1780/2400	1930/2450	2324/2526	2380/2920	
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	super elastic	
	3.2	Tyre size, front		6.00 - 9	6.00 - 9	21x8 - 9	23x9 - 10	23x9 - 10	23x9 - 10	23x9 - 10	23x10 - 12	
	3.3	Tyre size, rear		5.00 - 8	5.00 - 8	5.00 - 8	18x7 - 8	18x7 - 8	18x7 - 8	18x7 - 8	200/50-10	
	3.5	Wheels, number front rear (x = driven wheels)		2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	
	3.6	Tread, front	b ₁₀ (mm)	888	888	938	1058	1058	1058	1058	1068	
Dimensions	3.7	Tread, rear	b ₁₁ (mm)	897.5	897.5	897.5	960	960	960	960	960	
	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	
	4.2	Height, mast lowered	h ₁ (mm)	1976	1976	1976	2006	2006	2006	2186	2186	
	4.3	Free lift	h ₂ (mm)	145/135/135	145/135/135	145/135/135	140	140	140	145	145	
	4.4	Lift	h ₃ (mm)	3000	3000	3000	3000	3000	3000	3000	3000	
	4.5	Height, mast extended	h ₄ (mm)	3955	3955	3955	4056	4056	4056	4152	4152	
	4.7	Height of overhead guard STD.	h ₆ (mm)	2130	2130	2130	2155	2155	2190	2190	2190	
		Height of overhead guard OPT.	h ₆ (mm)	2050	2050	2050	2075	2075	2110	2110	2110	
	4.8	Seat height	h ₇ (mm)	1045	1045	1045	1070	1070	1070	1070	1070	
	4.12	Coupling height	h ₁₀ (mm)	275	275	275	303	303	303	303	303	
	4.19	Overall length	l ₁ (mm)	3018	3018	3018	3412	3412	3552	3572	3652	
	4.20	Length to face of forks	l ₂ (mm)	2098	2098	2098	2342	2342	2482	2502	2582	
	4.21	Overall width	b ₁ (mm)	1120	1120	1138	1265	1265	1265	1265	1302	
	4.22	Fork dimensions	s/e/l (mm)	35/120/920	35/120/920	35/120/920	40/122/1070	40/122/1070	40/122/1070	45/125/1070	50/125/1070	
	4.23	Fork carriage DIN 15 173 --- ISO 2328, class/type A,B		ISO2328 2A	ISO2328 2A	ISO2328 2A	ISO2328 2A	ISO2328 2A	ISO2328 2A	ISO2328 3A	ISO2328 3A	
	4.24	Fork-carriage width	b ₃ (mm)	1072	1072	1072	1118	1118	1118	1200	1200	
	4.25	Distance between fork-arms	b ₅ (mm)	240/1000	240/1000	240/1000	240/1038	240/1038	240/1038	290/1100	290/1100	
	4.31	Ground clearance, laden, below mast	m ₁ (mm)	100	100	100	112	112	112	115	115	
	4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	110	110	110	120	120	125	125	125	
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	A _{st} (mm)	3506	3506	3506	3745	3745	3885	3905	3985	
	4.34.2	Aisle width for pallets 800 x 1200 Lengthways	A _{st} (mm)	3706	3706	3706	3945	3945	4085	4105	4185	
	4.35	Turning radius	W _a (mm)	1900	1900	1900	2090	2090	2230	2230	2310	
	4.36	Internal turning radius	b ₁₃ (mm)	620	620	680	730	730	730	730	730	
	Performance data	5.1	Travel speed, laden/unladen	km/h	14/14	14/14	13.5/14	14/14	14/14	14/14	14/14	12/13
		5.2	Lift speed, laden/unladen	m/s	0.29/0.44	0.29/0.44	0.285/0.44	0.28/0.44	0.23/0.43	0.23/0.43	0.25/0.4	0.21/0.4
		5.3	Lowering speed, laden/unladen	m/s	0.3/0.41	0.3/0.41	0.275/0.42	0.285/0.42	0.215/0.41	0.215/0.41	0.26/0.39	0.26/0.37
		5.5	Drawbar pull, laden/unladen	N	9000 /10000	9000 /10000	9500/11000	12000/12500	16000/17000	16000/17000	20000 /21000	20500/21000
		5.6	Max. Drawbar pull, laden/unladen	N	11000	11000	12000	14000	18000	18000	22000	23000
5.7		Gradeability, laden/unladen	%	12/13	12/13	12/13	11/12	11/12	11/12	11/12	11/12	
5.8		Max. gradeability, laden/unladen	%	15/16	15/16	15/16	13/14	13/14	13/14	13/14	13/14	
5.9		Acceleration time, laden/unladen (0-10m)	s	5.3/5.0	5.3/5.0	5.3/5.1	5.2/4.6	5.3/4.7	5.3/5	5.3/5	5.5/5.2	
5.10		Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	
		Parking brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	
Electric engine	6.1	Drive motor rating S2 60 min	kW	8 AC	8 AC	8 AC	11 AC	11 AC	15AC	15AC	15 AC	
	6.2	Lift motor rating at S3 15%	kW	8.2 DC/8.6 AC/ 8.6 AC			8.6 DC/8.6 AC/8.6 AC			10 DC/10 AC/10 AC		
	6.3	Battery acc.to DIN 43 531/35/36 A,B,C,no		no	no	no	no	no	no	no	no	
	6.4	Battery voltage, nominal capacity K5 (Lead-acid)	V/Ah	48/420	48/420	48/420	48/630	48/630	80/500	80/500	80/500	
	6.5	Battery weight	kg	760	760	760	1050	1050	1530	1530	1530	
		Min. battery weight	kg	700	700	700	930	930	1200	1200	1200	
		Max. battery weight	kg	900	900	900	1200	1200	1550	1550	1550	
		Battery dimensions	l/b/h(mm)	980×465×780	980×465×780	980×465×780	1028×570×780	1028×570×780	1028×710×780	1028×710×780	1028×710×780	
6.6	Energy consumption acc. to VDI cycle	kWh/h	4.4	4.4	4.6	5.0	5.8	5.8	6.5	6.7		
	8.1	Type of drive control		MOSFET/AC								
	9.1	Manufacturer		CURTIS / CURTIS / INMOTION GEN6								
Addition data	10.1	Operating pressure for attachments	bar	145	145	145	175	175	175	175	175	
	10.2	Oil volume for attachments	l/min	65	65	65	65	65	65	65	65	
	10.3	Hydraulic Tank - capacity (drain & refill)	liter(gal)	22	22	22	22	22	22	24	24	
	10.7	Sound pressure level at the driver's seat	dB (A)	72	72	73	73	74	74	74	74	
	10.8	Towing coupling, type DIN 15170		Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	

AC3: means Curtis AC traveling system with DC Pump system, semi-AC system , AC4: means Curtis AC traveling system with AC Pump system, full-AC system

AD2: means Inmotion AC traveling system with AC Pump system, full-AC system

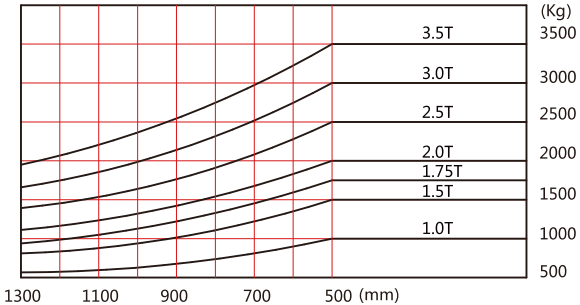
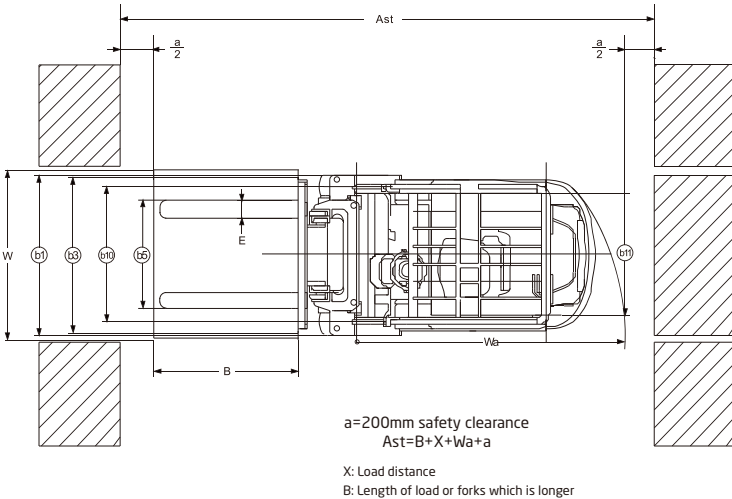
1.0~1.8t A Series Mast Specification

Type	Model	Lifting height	Lowered overall height	Overall height		Free lifting height		Tilting range		Capacity (Mast vertical to ground)					
				With backrest	Without backrest	With backrest	Without backrest	FWD	BWD	Load center@500mm Single Tire			Load center@500mm Front Dual Tire		
		mm	mm	mm	mm	mm	mm	(°)	(°)	1.0t	1.5t	1.8t	1.0t	1.5t	1.8t
Duplex wide view mast	M250	2500	1726	3455	3064	145	145	5	6	1000	1500	1800	1000	1500	1800
	M270	2700	1826	3655	3264	145	145	5	6	1000	1500	1800	1000	1500	1800
	M300	3000	1976	3955	3564	145	145	5	10	1000	1500	1800	1000	1500	1800
	M330	3300	2126	4255	3864	145	145	5	10	1000	1500	1800	1000	1500	1800
	M350	3500	2226	4455	4064	145	145	5	10	1000	1500	1800	1000	1500	1800
	M360	3600	2326	4555	4164	145	145	5	10	1000	1500	1800	1000	1500	1800
	M400	4000	2576	4955	4564	145	145	5	10	1000	1500	1800	1000	1500	1800
	M430	4300	2726	5255	4864	145	145	5	6	1000	1500	1700	1000	1500	1800
Duplex full-free lifting mast	M450	4500	2826	5455	5064	145	145	5	6	1000	1500	1650	1000	1500	1700
	U250	2500	1726	3455	3095	781	1141	5	6	1000	1500	1800	1000	1500	1800
	U270	2700	1826	3655	3295	881	1241	5	6	1000	1500	1800	1000	1500	1800
	U300	3000	1976	3955	3595	1031	1391	5	10	1000	1500	1800	1000	1500	1800
	U330	3300	2126	4255	3895	1181	1541	5	10	1000	1500	1800	1000	1500	1800
	U360	3600	2276	4555	4195	1331	1691	5	10	1000	1500	1800	1000	1500	1800
Triplex full-free lifting mast	U400	4000	2526	4955	4595	1581	1941	5	10	1000	1500	1800	1000	1500	1800
	N400	4000	1976	4955	4736	1031	1250	5	6	1000	1500	1750	1000	1500	1800
	N430	4300	2076	5255	5036	1131	1350	5	6	1000	1500	1650	1000	1500	1750
	N450	4500	2086	5465	5105	1141	1501	5	6	1000	1500	1650	1000	1500	1750
	N480	4800	2201	5755	5411	1256	1600	5	6	1000	1400	1600	1000	1500	1700
	N500	5000	2251	5955	5595	1306	1666	5	6	1000	1400	1550	1000	1500	1600
	N550	5500	2426	6455	6095	1481	1841	3	6	1000	1250	1500	1000	1350	1600
	N600	6000	2651	6955	6661	1706	2000	3	6	1000	1100	1300	1000	1200	1400
	N650	6500	2816	7455	7126	1871	2200	3	6	900	900	1150	1000	1000	1200



2.0~2.5t A Series Mast Specification

Type	Model	Lifting height	Lowered overall height	Overall height		Free lifting height		Tilting range		Capacity (Mast vertical to ground)							
				With backrest	Without backrest	With backrest	Without backrest	Forward	Backward	Load center@ 500mm Single Tire		Load center@ 500mm Front Dual Tire		Load center@24in Single Tire		Load center@24in Front Dual Tire	
		mm	mm	mm	mm	mm	mm	(°)	(°)	2.0t	2.5t	2.0t	2.5t	4000	5000	4000	5000
Duplex wide view mast	M250	2500	1756	3556	3151	145	145	5	6	2000	2500	2000	2500	4000	5000	4000	5000
	M270	2700	1856	3756	3351	145	145	5	6	2000	2500	2000	2500	4000	5000	4000	5000
	M300	3000	2006	4056	3651	145	145	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M330	3300	2171	4386	3981	145	145	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M350	3500	2256	4556	4151	145	145	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M360	3600	2306	4656	4251	145	145	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M400	4000	2556	5056	4651	145	145	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M430	4300	2731	5376	4971	145	145	5	6	2000	2500	2000	2500	4000	5000	4000	5000
Duplex full-free lifting mast	M450	4500	2831	5556	5151	145	145	5	6	2000	2450	2000	2500	4000	4900	4000	5000
	U250	2500	1781	3546	3132	735	1149	5	6	2000	2500	2000	2500	4000	5000	4000	5000
	U270	2700	1881	3746	3332	835	1249	5	6	2000	2500	2000	2500	4000	5000	4000	5000
	U300	3000	1981	4046	3632	935	1349	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	U330	3300	2131	4346	3932	1085	1499	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	U360	3600	2281	4646	4232	1235	1649	5	10	2000	2500	2000	2500	4000	5000	4000	5000
Triplex full-free lifting mast	U400	4000	2531	5046	4632	1485	1899	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	N430	4300	2026	5356	4980	980	1356	5	6	2000	2450	2000	2500	4000	4900	4000	5000
	N450	4500	2096	5606	5230	1050	1426	5	6	2000	2350	2000	2400	4000	4700	4000	4800
	N480	4800	2196	5856	5480	1150	1526	5	6	1950	2250	2000	2300	3900	4500	4000	4600
	N500	5000	2261	6056	5680	1215	1591	5	6	1850	2150	1950	2200	3700	4300	3900	4400
	N550	5500	2426	6556	6180	1380	1756	3	6	1800	2050	1900	2100	3600	4100	3800	4200
	N600	6000	2646	7066	6690	1600	1976	3	6	1650	1650	1800	1900	3300	3300	3600	3800
	N650	6500	2820	7556	7180	1775	2151	3	6	1550	1350	1700	1800	3100	2700	3400	3600



3.0~3.5t A Series Mast Specification

Type	Model	Lifting height	Lowered overall height		Overall height				Free lifting height				Tilting range		Capacity (Mast vertical to ground)								Capacity (Mast most forward@max height)				Capacity (Mast most forward@max height)			
					With backrest	With backrest	Without backrest	Without backrest	With backrest	With backrest	Without backrest	Without backrest	Forward	Backward	Load center@500mm Single Tire		Load center@500mm Front Dual Tire		Load center@24in Single Tire		Load center@24in Front Dual Tire		Load center@500mm Single Tire		Load center@500mm Front Dual Tire		Load center@24in Single Tire		Load center@24in Front Dual Tire	
															3.0t	3.5t	3.0t	3.5t	3.0t	3.5t	3.0t	3.5t	6000	7000	6000	7000	3.0t	3.5t	3.0t	3.5t
			mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
Duplex wide view mast	M250	2500	1786	1936	3652	3652	3213	3288	145	150	145	150	5	6	3000	3500	3000	3500	6000	7000	6000	7000	2462	2887	2462	2887	4925	5775	4925	5775
	M270	2700	1886	2036	3852	3852	3413	3488	145	150	145	150	5	6	3000	3500	3000	3500	6000	7000	6000	7000	2428	2847	2428	2847	4855	5694	4855	5694
	M300	3000	2036	2186	4152	4152	3713	3788	145	150	145	150	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2377	2787	2377	2787	4753	5574	4753	5574
	M330	3300	2186	2336	4452	4452	4013	4088	145	150	145	150	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2328	2730	2328	2730	4656	5459	4656	5459
	M350	3500	2286	2436	4652	4652	4213	4288	145	150	145	150	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2295	2691	2295	2691	4590	5383	4590	5383
	M360	3600	2336	2486	4752	4752	4313	4388	145	150	145	150	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2279	2672	2279	2672	4558	5345	4558	5345
	M400	4000	2586	2686	5152	5152	4713	4788	145	150	145	150	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2221	2604	2221	2604	4441	5208	4441	5208
	M430	4300	2761	2836	5472	5452	5033	5088	145	150	145	150	5	6	3000	3400	3000	3500	6000	6800	6000	7000	2176	2479	2176	2479	4352	4958	4352	4958
	M450	4500	2861	2936	5652	5652	5213	5288	145	150	145	150	5	6	3000	3300	3000	3400	6000	6600	6000	6800	2149	2376	2149	2376	4298	4752	4298	4752
	M480	4800	3026	3086	5952	5952	5513	5588	145	150	145	150	5	6	2950	3200	3000	3300	5900	6400	6000	6600	2074	2261	2109	2261	4148	4522	4218	4522
Duplex full-free lifting mast	M500	5000	3136	3186	6152	6152	5713	5788	145	150	145	150	5	6	2850	3100	2950	3200	5700	6200	5900	6400	1978	2163	2047	2232	3956	4326	4094	4464
	U250	2500	1826	1936	3652	3652	3247	3292	684	794	1089	1154	5	6	3000	3500	3000	3500	6000	7000	6000	7000	2462	2887	2462	2887	4925	5775	4925	5775
	U270	2700	1926	2036	3852	3852	3447	3492	784	894	1189	1254	5	6	3000	3500	3000	3500	6000	7000	6000	7000	2428	2847	2428	2847	4855	5694	4855	5694
	U300	3000	2036	2136	4152	4142	3721	3786	894	994	1325	1350	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2377	2787	2377	2787	4753	5574	4753	5574
	U330	3300	2186	2336	4452	4452	4021	4096	1044	1194	1475	1550	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2328	2730	2328	2730	4656	5459	4656	5459
	U360	3600	2336	2495	4752	4752	4321	4396	1194	1353	1625	1709	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2279	2672	2279	2672	4558	5345	4558	5345
	U400	4000	2536	2695	5152	5152	4721	4796	1394	1553	1825	1909	5	10	3000	3500	3000	3500	6000	7000	6000	7000	2221	2604	2221	2604	4441	5208	4441	5208
	N430	4300	2041	2151	5452	5452	5081	5156	909	1009	1280	1305	5	6	3000	3300	3000	3400	6000	6600	6000	6800	2176	2406	2176	2406	4352	4812	4352	4812
	N450	4500	2121	2221	5706	5652	5335	5356	979	1079	1350	1375	5	6	3000	3200	3000	3300	6000	6400	6000	6600	2149	2304	2149	2304	4298	4608	4298	4608
	N480	4800	2221	2321	5952	5952	5581	5656	1079	1179	1450	1475	5	6	2900	3100	2950	3200	5800	6200	5900	6400	2039	2190	2074	2190	4078	4381	4148	4381
Triplex full-free lifting mast	N500	5000	2287	2387	6152	6152	5781	5856	1145	1245	1516	1541	5	6	2850	3100	2900	3200	5700	6200	5800	6400	1978	2163	2013	2232	3956	4326	4026	4464
	N550	5500	2451	2551	6652	6652	6281	6356	1309	1409	1680	1705	3	6	2670	3000	2750	3100	5340	6000	5500	6200	1798	2031	1852	2099	3596	4062	3704	4198
	N600	6000	2671	2717	7160	7152	6789	6856	1529	1575	1900	1871	3	6	2200	2700	2500	2800	4400	5400	5000	5600	1438	1774	1634	1840	2876	3548	3268	3680
	N650	6500	2846	2946	7652	7652	7281	7356	1704	1804	2075	2100	3	6	2000	2200	2300	2300	4000	4400	4600	4600	1271	1405	1462	1469	2542	2810	2924	2938