



ZHEJIANG HANGCHA IMP. & EXP. CO., LTD.

**Factory site:** No. 88, Donghuan Rd., Lin'an Economic Development Zone, Zhejiang, China (311305)

Tel: +86-571-88926735 88926755  
Fax: +86-571-88132890 88926789

sales@hcforklift.com  
www.hcforklift.com



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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*



# Move freely, lift freely

The newest generation A series 1-3.5t electric counter balance truck is new product series of HANGCHA. The totally new designed outline, safety, comfortable and reliability are fully improved, and the whole truck's performance is also increased.



## 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

Easy to see dashboard is relocated to overhead, no restriction of the operator's visibility. The operator can monitor the truck operation at a glance.



## 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.



## EPB

Electronic Parking Brake, it provides the safe and rapid brake performance. More particularly, turn on the function automatically under different working situation.



# 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 slope 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

Z3/  
Z4  
system



ZAPI dashboard



Imported high performance, and new generation AC controller



ZAPI 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.



The cover below control panel are fully closed

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

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

Full opened engine hood

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

Protective roof

# Accessory

Standard Features	Options
/ High efficiency AC driving motor	/ Side way battery change
/ Special for truck'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 rear lights	/ Battery charger
/ Big dimension rubber pad	/ Rear lighting system
/ Sheet metal 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	/ Left and right rear view mirror
/ Storage box	/ Reversing hand grip with horn button
/ Soft landing system	/ Wide fork carriage
/ Standard forks in red	/ Other dimension forks
/ 3m duplex wide view mast	/ Duplex mast with full free lift
/ Tow coupling	/ Triplex mast
/ Center located rear view mirror	/ Integrated side shift
/ Suspension seat with higher OHG	/ Other attachments
/ Turning speed is automatically reduced when steering for Model 2.0~3.5t	/ OPS
/ The cover below control panel are fully closed	/ Blue spot light
/ Dashboard is relocated to overhead, no restriction of the operator's visibility	/ Other specification on demand
/ EPB: Electronic Parking Brake	

# Color Selection

	Color NO. STD. Yellow		Color NO. STD. Red
	Color NO. RAL2000 Yellow Orange		Color NO. HC6024 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

		HANGCHA GROUP CO.,LTD.								
		CPD10-AC3/C4/ 23/24-E	CPD15-AC3/C4/ 23/24-E	CPD18-AC3/C4/ 23/24-E	CPD20-AC3/C4/ 23/24-E	CPD25-AC3/C4/ 23/24-E	CPD30-AC3/C4/ 23/24-E	CPD35-AC3/C4/ 23/24-E	CPD35-AC3/C4/ 23/24-E	CPD35-AC3/C4/ 23/24-E
Distinguishing mark	1.1 Manufacturer	HANGCHA GROUP CO.,LTD.								
	1.2 Manufacturers type designation									
	1.3 Drive: electric (battery or mains), diesel, petrol, fuel gas	electric	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	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	3700	4180	4580	5050
2.2 Axle loading, laden front/rear		kg	3900/540	3900/540	4300/590	5016/684	5920/760	6335/725	7160/890	8020/930
2.3 Axle loading, unladen front/rear		kg	1353/1587	1353/1587	1440/1650	1628/2072	1780/2400	2130/2450	2424/2626	2450/3000
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 <sub>10</sub> (mm)	888	888	938	1058	1058	1058	1058	1068
	3.7 Tread, rear	b <sub>11</sub> (mm)	897.5	897.5	897.5	960	960	960	960	960
	Dimensions	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
4.2 Height, mast lowered		h <sub>1</sub> (mm)	1976	1976	1976	2006	2006	2006	2186	2186
4.3 Free lift		h <sub>2</sub> (mm)	145/135/135	145/135/135	145/135/135	140	140	140	145	145
4.4 Lift		h <sub>3</sub> (mm)	3000	3000	3000	3000	3000	3000	3000	3000
4.5 Height, mast extended		h <sub>4</sub> (mm)	3955	3955	3955	4056	4056	4056	4152	4152
4.7 Height of overhead guard STD.		h <sub>6</sub> (mm)	2130	2130	2130	2155	2155	2190	2190	2190
4.8 Height of overhead guard OPT.		h <sub>6</sub> (mm)	2050	2050	2050	2075	2075	2110	2110	2110
4.8 Seat height		h <sub>7</sub> (mm)	1045	1045	1045	1070	1070	1070	1070	1070
4.12 Coupling height		h <sub>10</sub> (mm)	275	275	275	303	303	303	303	303
4.19 Overall length		l <sub>1</sub> (mm)	3018	3018	3018	3412	3412	3552	3572	3652
4.20 Length to face of forks		l <sub>2</sub> (mm)	2098	2098	2098	2342	2342	2482	2502	2582
4.21 Overall width		b <sub>1</sub> (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 <sub>3</sub> (mm)	1072	1072	1072	1118	1118	1118	1200	1200
4.25 Distance between fork-arms		b <sub>5</sub> (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 <sub>1</sub> (mm)	100	100	100	112	112	112	115	115
4.32 Ground clearance, centre of wheelbase		m <sub>2</sub> (mm)	110	110	110	120	120	125	125	125
4.34.1 Aisle width for pallets 1000 x 1200 crossways	A <sub>st</sub> (mm)	3506	3506	3506	3745	3745	3885	3905	3985	
4.34.2 Aisle width for pallets 800 x 1200 Lengthways	A <sub>st</sub> (mm)	3706	3706	3706	3945	3945	4085	4105	4185	
4.35 Turning radius	W <sub>0</sub> (mm)	1900	1900	1900	2090	2090	2230	2230	2310	
4.36 Internal turning radius	b <sub>13</sub> (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		Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric
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/8.2 DC/8.6 AC			8.6 DC/8.6 AC/8.6 DC/8.6 AC			10 DC/10 AC/10 DC/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	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
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/ZAPI/ZAPI								
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		ø24 Pin	ø24 Pin	ø24 Pin	ø24 Pin	ø24 Pin	ø24 Pin	ø24 Pin	ø24 Pin

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

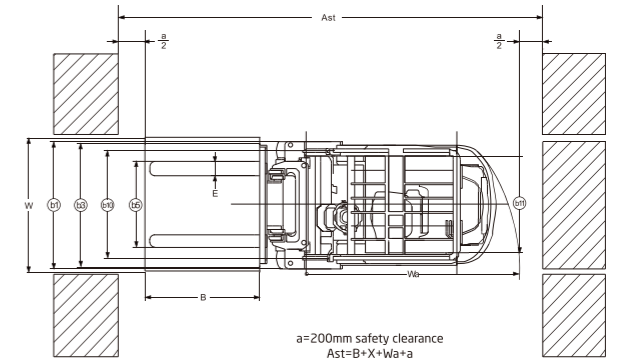
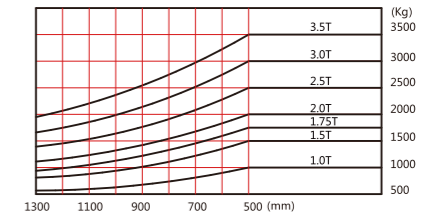
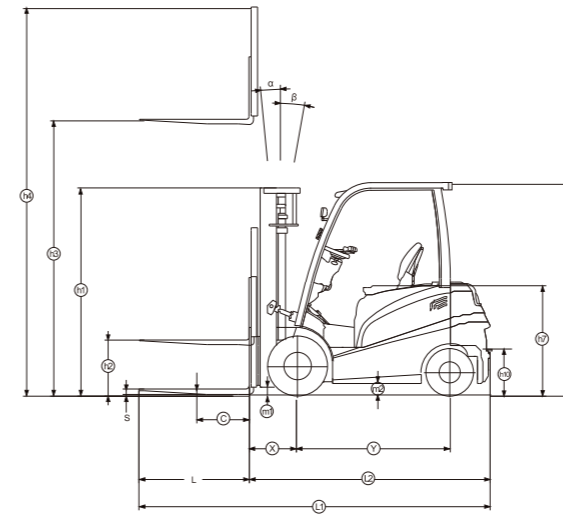
AC4: means Curtis AC traveling system with AC Pump system, full-AC system

AZ3: means ZAPI AC traveling system with DC Pump system, semi-AC system

AZ4: means ZAPI 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	(°)	(°)	1.0t	1.5t	1.75t	1.0t	1.5t	1.75t
Duplex wide view mast	M250	2500	1726	3455	3064	145	145	5	10	1000	1500	1750	1000	1500	1750
	M270	2700	1826	3655	3264	145	145	5	10	1000	1500	1750	1000	1500	1750
	M300	3000	1976	3955	3564	145	145	5	10	1000	1500	1750	1000	1500	1750
	M330	3300	2126	4255	3864	145	145	5	10	1000	1500	1750	1000	1500	1750
	M350	3500	2226	4455	4064	145	145	5	10	1000	1500	1750	1000	1500	1750
	M360	3600	2326	4555	4164	145	145	5	10	960	1450	1750	960	1450	1750
	M400	4000	2526	4955	4564	145	145	5	10	930	1400	1700	930	1400	1700
	M430	4300	2726	5255	4864	145	145	5	6	850	1300	1550	910	1350	1650
	M450	4500	2826	5455	5064	145	145	5	6	800	1200	1450	900	1300	1600
	Duplex full-free lifting mast	U250	2500	1726	3455	3070	781	1158	5	10	1000	1500	1750	1000	1500
U270		2700	1826	3655	3270	881	1244	5	10	1000	1500	1750	1000	1500	1750
U300		3000	1976	3955	3570	1031	1394	5	10	1000	1500	1750	1000	1500	1750
U330		3300	2126	4255	3870	1181	1544	5	10	1000	1500	1750	1000	1500	1750
U360		3600	2276	4555	4170	1331	1694	5	10	900	1350	1750	930	1450	1750
U400		4000	2526	4955	4570	1581	1944	5	6	850	1300	1650	900	1350	1600
U450		4500	2826	5455	5070	1831	2194	5	6	800	1200	1500	850	1250	1500
Triplex full-free lifting mast	N400	4000	1976	4955	4570	1031	1416	5	6	900	1350	1600	930	1400	1700
	N430	4300	2076	5255	4870	1131	1516	5	6	850	1300	1550	850	1350	1600
	N450	4500	2086	5455	5070	1141	1614	5	6	800	1200	1450	800	1250	1500
	N480	4800	2201	5755	5370	1256	1641	5	6	650	1100	1300	700	1200	1350
	N500	5000	2251	5955	5570	1306	1691	5	6	600	1000	1200	650	1050	1250
	N550	5500	2426	6455	6070	1481	1866	3	6	500	700	800	550	750	900
	N600	6000	2651	6955	6570	1706	2091	3	6	300	450	600	350	500	650
	N650	6500	2830	7455	7070	1820	2152	3	6	200	250	350	300	400	500



a=200mm safety clearance  
 $Ast=B+W+Wb+a$   
 X: Load distance  
 B: Length of load or forks which is longer

## 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	(°)	(°)	2.0t	2.5t	2.0t	2.5t	4000	5000	4000	5000
Duplex wide view mast	M250	2500	1786	3556	3234	140	140	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M270	2700	1886	3756	3434	140	140	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M300	3000	2006	4056	3734	140	140	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M330	3300	2186	4356	4034	140	140	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M350	3500	2286	4556	4234	140	140	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M360	3600	2336	4656	4334	140	140	5	10	2000	2500	2000	2500	4000	5000	4000	5000
	M400	4000	2586	5056	4734	140	140	5	10	1900	2300	1950	2400	3800	4600	3900	4800
	M430	4300	2751	5356	5034	140	140	5	6	1800	2100	1900	2300	3600	4200	3800	4600
	M450	4500	2861	5556	5234	140	140	5	6	1700	2000	1800	2200	3400	4000	3600	4400
	Duplex full-free lifting mast	U250	2500	1766	3556	3185	720	1091	5	10	2000	2500	2000	2500	4000	5000	4000
U270		2700	1866	3756	3385	820	1191	5	10	2000	2500	2000	2500	4000	5000	4000	5000
U300		3000	1966	4056	3685	920	1291	5	10	2000	2500	2000	2500	4000	5000	4000	5000
U330		3300	2116	4356	3985	1070	1441	5	10	2000	2500	2000	2500	4000	5000	4000	5000
U360		3600	2266	4656	4285	1220	1591	5	10	2000	2500	2000	2500	4000	5000	4000	5000
U400		4000	2516	5056	4685	1470	1841	5	10	1900	2300	1950	2350	3800	4600	3900	4700
U450		4500	2766	5356	5019	1620	2091	5	6	1700	2000	1800	2250	3400	4000	3600	4500
Triplex full-free lifting mast	N450	4500	2096	5556	5219	1050	1387	5	6	1600	1900	1700	2150	3200	3800	3400	4300
	N480	4800	2196	5856	5519	1150	1487	5	6	1500	1700	1600	2100	3000	3400	3200	4200
	N500	5000	2261	6056	5719	1215	1552	5	6	1400	1600	1500	2000	2800	3200	3000	4000
	N550	5500	2426	6556	6219	1380	1717	3	6	1050	1200	1450	1900	2100	2400	2900	3800
	N600	6000	2641	7056	6719	1595	1932	3	6	700	800	1400	1600	1400	1600	2800	3200
	N650	6500	2820	7556	7219	1774	2111	3	6	500	650	1200	1300	1000	1300	2400	2600

## 2.5t long wheelbase 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)			
				With backrest	Without backrest	With backrest	Without backrest	Forward	Backward	Load center@ 500mm Single Tire		Load center@ 24in Single Tire		Load center@ 500mm Single Tire		Load center@ 24in Single Tire	
				mm	mm	mm	mm	(°)	(°)	2.5tLW	2.5tLW	5000LW	5000LW	2.5tLW	2.5tLW	5000LW	5000LW
Duplex wide view mast	M250	2500	1786	3556	3234	140	140	5	10	2500	2500	5000	5000	2075	2075	4150	4150
	M270	2700	1886	3756	3434	140	140	5	10	2500	2500	5000	5000	2050	2050	4100	4100
	M300	3000	2006	4056	3734	140	140	5	10	2500	2500	5000	5000	2000	2000	4000	4000
	M330	3300	2186	4356	4034	140	140	5	10	2500	2500	5000	5000	1950	1950	3900	3900
	M350	3500	2286	4556	4234	140	140	5	10	2500	2500	5000	5000	1925	1925	3850	3850
	M360	3600	2336	4656	4334	140	140	5	10	2500	2500	5000	5000	1925	1925	3850	3850
	M400	4000	2586	5056	4734	140	140	5	10	2500	2500	5000	5000	1875	1875	3750	3750
	M430	4300	2751	5356	5034	140	140	5	6	2500	2500	5000	5000	1825	1825	3650	3650
	M450	4500	2861	5556	5234	140	140	5	6	2300	2500	4600	5000	1656	1656	3312	3312
	Duplex full-free lifting mast	U250	2500	1766	3556	3185	720	1091	5	10	2500	2500	5000	5000	2075	2075	4150
U270		2700	1866	3756	3385	820	1191	5	10	2500	2500	5000	5000	2050	2050	4100	4100
U300		3000	1966	4056	3685	920	1291	5	10	2500	2500	5000	5000	2000	2000	4000	4000
U330		3300	2116	4356	3985	1070	1441	5	10	2500	2500	5000	5000	1950	1950	3900	3900
U360		3600	2266	4656	4285	1220	1591	5	10	2500	2500	5000	5000	1925	1925	3850	3850
U400		4000	2516	5056	4685	1470	1841	5	10	2500	2500	5000	5000	1875	1875	3750	3750
U450		4500	2766	5356	5019	1620	2091	5	6	2300	2500	4600	5000	1680	1680	3360	3650
Triplex full-free lifting mast	N450	4500	2096	5556	5219	1050	1387	5	6	2200	2350	4400	4700	1584	1692	3168	3384
	N480	4800	2196	5856	5519	1150	1487	5	6	2100	2200	4200	4400	1491	1562	2982	3124
	N500	5000	2261	6056	5719	1215	1552	5	6	1900	2100	3800	4200	1330	1470	2660	29