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ISO14001  
ISO14001:2015



ISO9001  
ISO9001:2015



HANGCHA trucks conform  
to the European Safety  
Requirements.

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## X series Electric Tow Tractor

with capacities of 6,000 to 10,000kg

*The World of Hangcha*



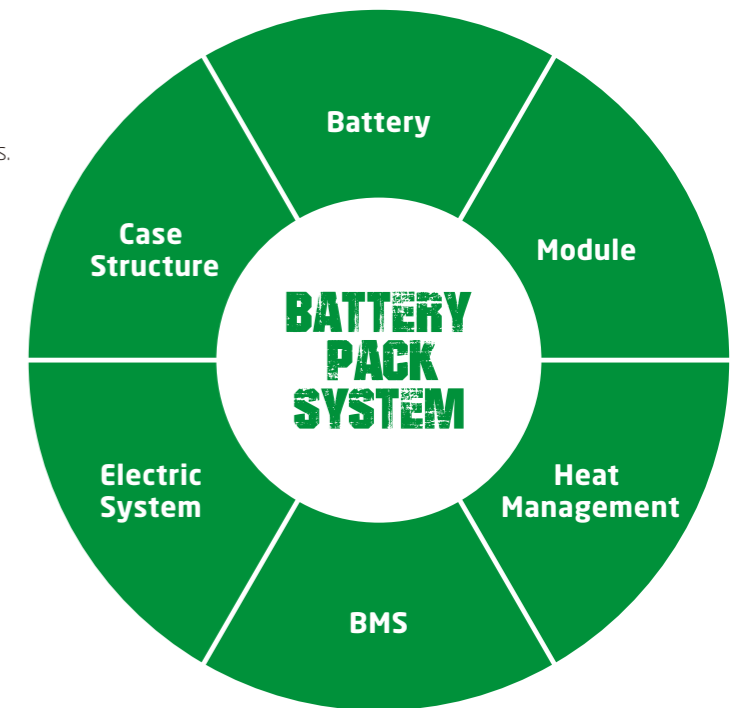
# LET THE LITHIUM POWER UNLEASH



## 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 2 hours.
- / 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.

### Li-Ion Battery Pack specification

Type		QDD60-XD2-I	QDD70-XD2-I	QDD80-XD2-I	QDD90-XD2-I	QDD100-XD2-I
Li-Ion battery	V/Ah	48/271	48/271	48/271	48/271	48/404
Titans charger		SLC-48200R	SLC-48200R	SLC-48200R	SLC-48200R	SLC-48200R



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



**Environment/  
Efficiency/  
Economy**



## Appearance

/ Large arc-shaped, streamlined surface modeling is adopted, with beautiful and elegant appearance.

## Comfort

- / Fully flexible suspension system is adopted for both front and rear axles, featuring small vibration and comfortable operation.
- / The battery of standard configuration is removed from truck side, so that maintenance and replacement of the battery is more convenient and rapid, which is suitable for continuous operation.
- / The optional fully-enclosed cab is suitable for operation in all kinds of weather conditions.

## Stability

- / The battery is sunk to bottom of carriage, so the truck has good stability.

## Advancement

- / Electromagnetic brake is adopted as parking brake, instead of traditional hand brake, so as to realize intelligent parking braking.
- / Fully flexible suspension system is adopted for both front and rear axles to ensure comfortable driving of the operator.
- / Large-screen LCD display and failure self-diagnosis instrument are applied to enable accurate display even in harsh environment.
- / The newly configured AC control system offers efficient, accurate adjustment performance, and extends working hours for single charge.
- / All lights of the truck are of LED, and the latest streamer technology is applied for front turn signal lamps.
- / The entire truck features high speed and high efficiency, with maximum travel speed up to 18km/h.



The battery can be removed from truck side, so it is very convenient for battery maintenance



Loading platform, easy to load and unload goods



Various operating pedals, instruments, steering wheel, and switches are configured based on ergonomic requirements, and are comfortable and flexible for operation



Upon special design, the traction device can prevent the towing pin coming out during traveling



Low-level widely open foot board is very convenient for the operator to get on / off the truck

# X Series

## Electric Tow Tractor



### Reliability and Safety

- / Motor controller, contactors, power socket, emergency power off switch and other main electric elements are all of famous brands from abroad.
- / Carriage, drive axle, steering axle and other main load-bearing parts are designed as high-strength parts, so as to meet heavy-load working conditions.
- / As standard configuration, emergency power off switch meets European safety standard.
- / AC power system features high efficiency, complete protection functions, and substantially higher reliability and service life.
- / Both front and rear wheels are equipped with brake to realize flexible and reliable braking.

### Easy Maintenance

- / The brushless, maintenance-free AC motor reduces operation cost significantly.
- / The easily-removable rear deck cover is convenient for debugging and maintenance of electronic control system.
- / Electronic control and electric elements are placed together with high degree of integration.

### Standard specification

- / LED headlamp (high beam, low beam), direction indication lamp, LED rear three-color combination lamp
- / DIN Battery
- / Horn, back-up beeper
- / Emergency power off switch
- / Large LCD display
- / Battery side roll out
- / Seat with safety belt



Cup holder, tool box

### Options

- / Simple canopy (with no windshield and windshield wipers)
- / Simple canopy (with windshield and windshield wipers)
- / Fully-enclosed cab
- / Fan (together with canopy or cab)
- / Alarm light
- / Specification of traction system (see Table 1)
- / Right and left rear-view mirrors (standard configuration for canopy, cab)
- / On-seat operation of traction pin
- / Fire extinguisher
- / Blue-light Lamp
- / Audible and visual alarm
- / LED rear working lamp
- / OPS system
- / Voice back-up beeper
- / Optional special seat
- / Optional imported brand battery
- / Super-elastic solid tires
- / Charger



## X series 6.0-10t Lead-acid Battery Tow Tractor Specification

		HANGCHA GROUP CO.,LTD.									
Distinguishing mark	1.1	Manufacturer									
	1.2	Model	QDD60-XD2	QDD70-XD2	QDD70-XD2-L	QDD80-XD2	QDD80-XD2-L	QDD90-XD2	QDD90-XD2-L	QDD100-XD2	
	1.3	Drive	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	
	1.4	Manual, pedestrian, stand-on, seated, order picker operation	Seat	Seat	Seat	Seat	Seat	Seat	Seat	Seat	
	1.5	Load capacity/rated load	Q (kg)	6000	7000	7000	8000	8000	9000	9000	10000
	1.7	Rated tractive power	F (N)	1500	1750	1750	2000	2000	2250	2250	2500
Weight	1.9	Wheelbase	y (mm)	1035	1035	1250	1035	1250	1035	1250	1250
	2.1.1	Net weight incl. battery (see row 6.5)	kg	1220	1270	1450	1330	1450	1380	1500	1550
Tyres, chassis	2.3	Axle load without load front/rear	kg	540/680	590/680	700/750	590/740	700/750	590/790	700/800	700/850
	3.1	Tyres, front/rear		Pneumatic/Pneumatic	Pneumatic/Pneumatic	SE/Pneumatic	Pneumatic/Pneumatic	SE/Pneumatic	SE/Pneumatic	SE/Pneumatic	SE/Pneumatic
	3.2	Tyre size, front	mm	4.00-8	4.00-8	16×6-8	4.00-8	16×6-8	16×6-8	16×6-8	16×6-8
	3.3	Tyre size, rear	mm	4.00-8	4.00-8	4.00-8	4.00-8	4.00-8	4.00-8	4.00-8	4.00-8
	3.5	Wheels, number front/rear (* = driven wheels)		1/2x	1/2x	1/2x	1/2x	1/2x	1/2x	1/2x	1/2x
	3.6	Tread width, front	b11 (mm)	0	0	0	0	0	0	0	0
	3.7	Tread width, rear	h10 (mm)	870	870	870	870	870	870	870	870
Dimensions	4.7	Height of overhead guard	h6 (mm)	2140	2140	2140	2140	2140	2140	2140	2140
	4.8	Seat height/stand height	h7 (mm)	1020	1020	1020	1020	1020	1020	1020	1020
	4.1.2	Coupling height	h10 (mm)	274	274	274	274	274	274	274	274
	4.1.2.1	2nd coupling height	mm	330	330	330	330	330	330	330	330
	4.1.2.2	3. Coupling height	mm	386	386	386	386	386	386	386	386
	4.1.3	loading height without load	h11 (mm)	686	686	686	686	686	686	686	686
	4.1.6	loading area length	l3 (mm)	395	395	395	395	395	395	395	395
	4.1.7	Overhang length	l5 (mm)	350	350	350	350	350	350	350	350
	4.1.8	Loading area width	b9 (mm)	908	908	908	908	908	908	908	908
	4.1.9	Overall length	l1 (mm)	1830	1830	2045	1830	2045	1830	2045	2045
	4.2.1	Overall width	b1 (mm)	996	996	996	996	996	996	996	996
	4.3.2	Ground clearance, centre of wheelbase	m2 (mm)	135	135	135	135	135	135	135	135
	4.3.5	Turning radius	Wa (mm)	1650	1650	1865	1650	1865	1650	1865	1865
4.3.6	Smallest pivot point distance	b13 (mm)	600	600	600	600	600	600	600	600	
Performance data	5.1	Travel speed, laden/unladen	km/h	11.2/18	10.5/18	10.5/18	9.4/18	9.4/18	9.0/18	9.0/18	8.5/18
	5.5	Drawbar pull w. / w.o. load	N	1500	1750	1750	2000	2000	2250	2250	2500
	5.6	Max. drawbar pull, laden/unladen	N	4500	5250	5250	6000	6000	6750	6750	7500
	5.7	Gradeability laden/unladen	%	5/25	5/25	5/25	5/25	5/25	5/25	5/25	5/25
	5.10	Service brake		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
Electrics	6.1	Drive motor, output S2 60 min.	Kw	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
	6.3	Battery as per DIN 43531 /35/36 A, B, C, no		A 43531	A 43531	A 43531	A 43531	A 43531	A 43531	A 43531	
	6.4	Battery voltage/nominal capacity K5	V/Ah	48/300	48/300	48/420	48/360	48/360	48/420	48/420	
	6.5	Battery weight	kg	502	502	685	560	685	560	685	
	8.1	Type of drive control		AC	AC	AC	AC	AC	AC	AC	
Misc.	8.4	Sound pressure level at operator's ear as per EN 12053		60	60	60	60	60	60	60	

## Battery specification

Battery voltage(V)	Capacity (Ah)	6t	7t	8t	9t	10t	7L	8L	9L
48	300	●	●	—	—	—	—	—	—
	360	○	○	●	●	—	—	—	—
	420	—	—	—	—	●	●	●	●
	500	—	—	—	—	—	○	○	○
	600	—	—	—	—	—	○	○	○

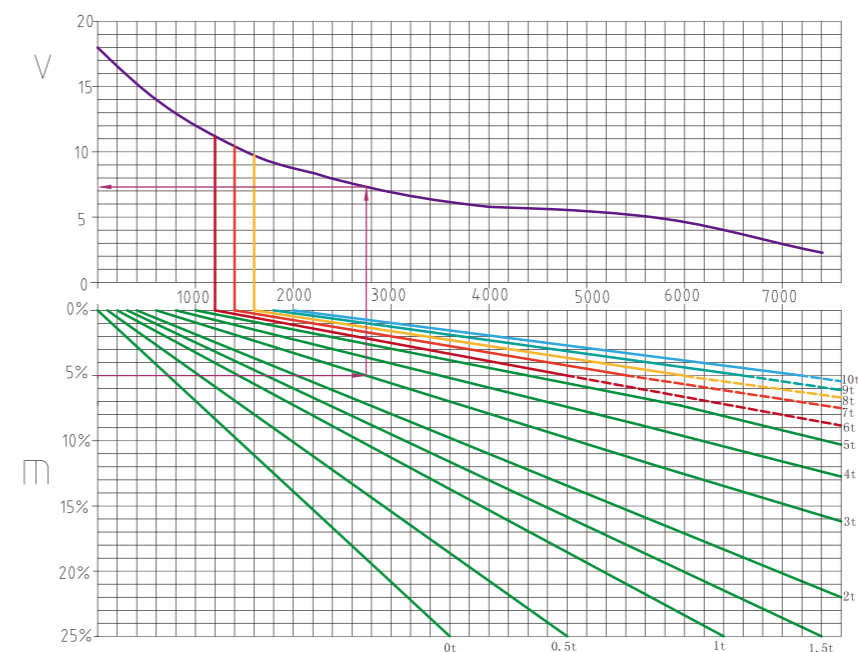
●Battery Std. ○Battery Opt. 7L means 7t long wheelbase;8L means 8t long wheelbase;9L means 9t long wheelbase

## X series 6.0-10t Lithium Battery Tow Tractor Specification

		HANGCHA GROUP CO.,LTD.						
Distinguishing mark	1.1	Manufacturer						
	1.2	Manufacturer's type designation	QDD60-XD2-I	QDD70-XD2-I	QDD80-XD2-I	QDD90-XD2-I	QDD100-XD2-I	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Electric	Electric	Electric	Electric	Electric	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	Seated	Seated	Seated	Seated	Seated	
	1.5	Rated capacity/rated load	Q(t)	6	7	8	9	10
	1.7	Rated drawbar pull	F(N)	1500	1750	2000	2250	2500
Weight	1.9	Wheelbase	y(mm)	1035	1035	1035	1035	1035
	2.1	Service Weight (Including battery)	kg	1150	1200	1250	1300	1385
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	Pneumatic/Pneumatic					
	3.2	Tyre size, front	4.00-8	4.00-8	4.00-8	16×6-8	16×6-8	
	3.3	Tyre size, rear	4.00-8	4.00-8	4.00-8	4.00-8	4.00-8	
	3.5	Wheels, number front / rear (x = driven wheels)	1/2x	1/2x	1/2x	1/2x	1/2x	
	3.6	Tread, front	b10 (mm)	0	0	0	0	
	3.7	Tread, rear	b11 (mm)	870	870	870	870	
	4.1.2	Coupling height	h10 (mm)	274	274	274	274	
Dimensions	4.1.7	Overhang	l5 (mm)	350	350	350	350	
	4.1.9	Overall length	l1 (mm)	1830	1830	1830	1830	
	4.2.1	Overall width	b1 (mm)	996	996	996	996	
	4.3.2	Ground clearance, centre of wheelbase	m2 (mm)	135	135	135	135	
	4.3.5	Turning radius	Wa (mm)	1650	1650	1650	1650	
Performance data	5.1	Travel speed, laden/unladen	km/h	11.2/18	10.5/18	9.4/18	9.0/18	
	5.6	Max. Drawbar pull	N	4500	5250	6000	6750	
	5.7	Gradeability, laden/unladen	%	5/25	5/25	5/25	5/25	
	6.1	Drive motor rating S2 60 min	kw	4.5	4.5	4.5	4.5	
	6.4	Battery voltage, nominal capacity K5	V/Ah	48/271	48/271	48/271	48/404	
Electric-engine	6.4	Battery voltage, nominal capacity K5 (Opt.)	V/Ah	48/404	48/404	48/404	/	
		Electric control model		INMOTION	INMOTION	INMOTION	INMOTION	

## Traction device specification

Std.	Coupling height h10a/b/c(mm)		h10a-h10a, h10c-h10c (mm)	
	Std.	274/330/386	50	
Opt 1	218/274/330	50		
Opt 2	330/386/442	50		



v=speed (km/h), m=incline (%), F=drawbar pull (N)

**Using method:** It requires about 2750N traction for towing when the QDD60-XD2 tow tractor travels on 5% upward slope by towing 3t load, and in such case the travel speed is 7.3km/h approximately.

**Warning:** Better apply tow tractor with brake when gradient of downward slope is over 4%.

