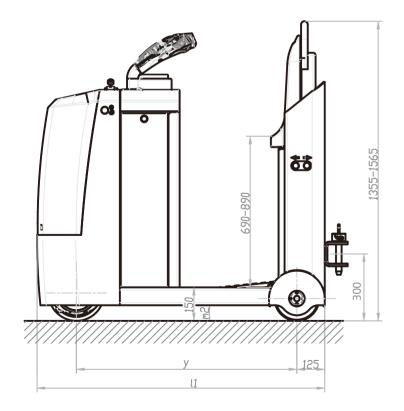
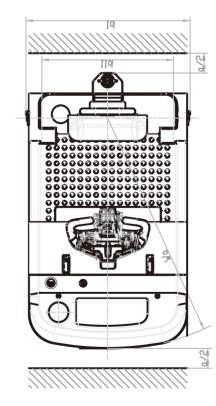
#### A Series Electric Tow Tractor

	1.1	Manufacturer	HANGCHA GR	A GROUP CO.,LTD.			
Distinguishing marks	1.2	Manufacturer's type designation		QDD3-ASC2	QDD3-ASC2-I	QDD5-ASC2	QDD5-ASC2-I
	1.2			QDD3-ASZ3	QDD3-ASZ3-I	QDD5-ASZ3	QDD5-ASZ3-I
	1.3	Drive		Electric	Electric	Electric	Electric
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		standing	standing	standing	standing
	1.5	Load capacity/rated load	Q (kg/lb)	3000	3000	5000	5000
	1.7	Rated drawbar pull	F (N/lbf)	600	600	1000 1000	
	1.9	Wheelbase	y (mm/in)	957	995	978	1016
itS	2.1	Service Weight	kg/lb	900	900	1000 1000	
WeightS	2.3	Axle loading, front/rear	kg/(lb)	610/290	610/290	700/300	700/300
	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		PU	PU	PU PU	
Wheels, Chassis	3.2	Tyre size, front	mm/in	Φ230×75	Φ230×75	Φ250×100	Φ250×100
	3.3	Tyre size, rear	mm/in	Φ200×100	Φ200×100	Φ200×100	Φ200×100
	3.5	Wheels, number front /rear (x=drive wheels)		1×/2	1×/2	1×/2	1×/2
	3.7	Track width, rear	b11 (mm/in)	669	669	669	669
Performance Dimensions	4.8	Seat height/stand height	h⁊ (mm/in)	150	150	150	150
	4.19	Overall length(without traction pin)	l1 (mm/in)	1289	1327	1289	1327
	4.21	Overall width	b1 (mm/in)	830	830	830	830
	4.32	Ground clearance, centre of wheelbase	m² (mm/in)	70	70	70	70
	4.35	Turning radius	Wa (mm/in)	1172	1210	1172	1210
	5.1	Travel speed, laden/unladen	km/h (mph)	7.0/10.0	7.0/10.0	7.0/10.0	7.0/10.0
	5.5	Drawbar pull at 60 minute rating	N/lbf	600	600	1000	1000
	5.6	Max. Drawbar pull at 5 minute rating	N/lbf	2400	2400	3200	3200
	5.7	Gradeability, laden	%	4	4	4	4
	5.10	Service brake		Electronmagnetic	Electronmagnetic	Electronmagnetic	Electronmagnetic
E-Motor	6.1	Drive motor rating S2 60 min.	kW/hp	2.2	2.2	3	З
	6.4	Battery voltage, rated capacity (STD.)	V/Ah	24/270	24/120	24/360	24/202
		Battery voltage, rated capacity (OPT.)	V/Ah	24/360	24/202~250	24/450	24/250
Others	8.1	Type of drive control		CURTIS ZAPI	CURTIS ZAPI	CURTIS ZAPI	CURTIS ZAPI

Specifications are subject to change without notice.





a=200mm Safety clearance



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# A Series Electric Tow Tractor

with capacities of 3,000 to 5,000kg



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HANGCHA provides Li-Ion battery (LiFePO4) with 5 years or 10000 hours 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 e° ective: Charging e,ciency 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: 2 hours full charge, economic use of each break.
- / 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.



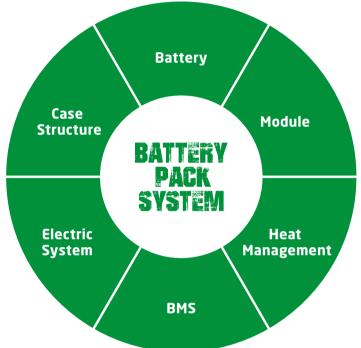
## Lead-acid batteries 8-10 hours 100%

## Rapid charging and opportunity charging ensure continuous availability of vehicles.

Li-lon 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**

Туре		QDD3-ASC2-1 QDD3-ASZ3-1	QDD5-ASC2-I QDD5-ASC3-I
Li-lon battery	V/Ah	24/120	24/202
Li-Ion battery, Optional	V/Ah	24/202~250	24/250
Titans charger		SPC-24100	SPC-24100



# **A Series Electric Tow Tractor**

HANGCHA A series 3.0-5.0t electric tow tractor is mainly applied in short-distance transportation among the production lines. Low operator platform for frequent and e° ortless entry and exit. Thanks to the standing design, it can greatly improve the e<sub>c</sub>ciency o f operations. Furthermore, for indoor application, the electric drive system is environmental friendly within the workshop. Therefore, this product is a good partner of automobile manufacturing, logistics companies, warehouses and other places, fields which has broad application prospects.



#### Appearance

- / A series 3.0-5.0t electric tow tractor applied professional industrial design, stream lines, and compact, and fully ergonomic consideration, in line with the latest design trends.
- / Applied steel stamping and injection molding processes for front and back guard, which is robust, durable, and also environmental compliance.

#### **High Performance**

- / Electric power steering is standard specification, which provides flexible operation.
- / Powered by AC traction motor not only has good acceleration and climbing performance, but also low heat, brushless, maintenance-free.
- / Latest AC control system, precise and smooth.
- / CAN-BUS connection enables all truck data can be read out for inspection, and also improves the data transition more quick and reliable.
- / Regenerative braking for battery recovery during travel speed reduction, anti-slope on gradient.
- / All key parts such as switches, connectors, battery indicator and hour meter all adopt the famous brand.

## Reliability

- / 3-pivot and side support bar system design ensure the safe and reliability.
- / Imported waterproof connectors, all wires and cables are protected, greatly improve the reliability of the electric system.
- / Safety switch of pedal using non-contact proximity switch, improves safety and reliability.
- / Though sideway battery change is standard specification, fixed in safe and reliable way.

## Comfort

- / The pedal applies shock absorption design, greatly improve the operator's comfort, reduce the fatigue.
- / Backrest height can be adjusted within a certain range, and the backrest with hip support can greatly improve the comfort of the operator.
- / Sideway change battery is the standard specification.
  The inching switches installed at the LH/RH side, greatly improve the ease of operation.
- / The easy to reached storage space is convenient for the operator.
- / Compact size, light weight and flexible, extremely easy to operate, can easily go through even in a compact space.

## Safety

- / Automatic deceleration during turning.
- / Pedal has a safety switch, which can e° ectively prevent mis-operation.
- / Three braking system of regenerative braking, reverse current braking , parking brake, insures the safe operation.
- / Steel front shield assures excellent safety for the operation.

#### Maintenance

- / AC motor without carbon brushes, maintenance-free, cost saving.
- / Integrated battery indicator, hour meter and self-diagnostic instrument.
- / Full opened hood, easy accessibility of all components, is easy for service.
- / All shafts are equipped with shaft sleeve and oil cup, easy maintenance, prolong service life.

#### **Standard Specification**

- / AC drive motor
- / Electric steering system
- / Inching switch(LH/RH)
- / Emergency cut o° swit ch
- / Stand-on pedal with shock absorber
- / Adjustable supportive backrest
- / Sideway change battery

- / Battery indicator
- / Warning signal when reversing
- / Multi-function handlebar
- / Horn
- / Tool box
- / Standard lead-acid battery

#### **Options**

- / Warning light
- / Working light
- / Handrail
- / Big capacity battery
- / Turning indicators
- / Di° erent height of towing coupling
- / Review Mirror



