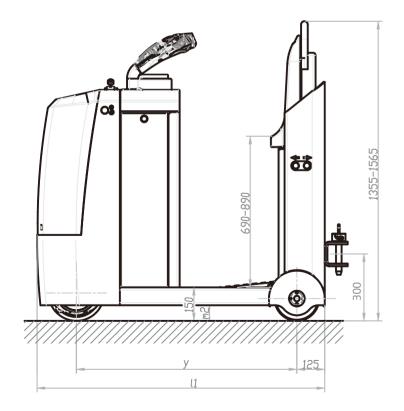
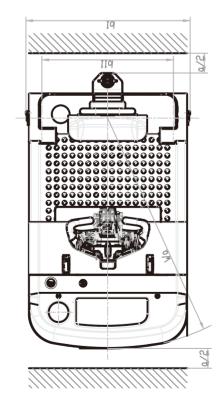
A Series Electric Tow Tractor

| | 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



Hangcha Europe GmbH Mariechen-Graulich-Straße 12a, 65439 Flörsheim am Main,

Germany Tel: 0049-61453769188

E-mail: admin@hangchaeurope.com

Mob: 0049-16096548808 (Thomas Dittrich) E-mail: thomas.dittrich@hangchaeurope.com Zip Code Area (1,2,3,4,5,6,7)

Mob: 0049-1605272481 (Jens Aßmuth) E-mail: jens.assmuth@hangchaeurope.com Zip Code Area (0,8,9)



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.



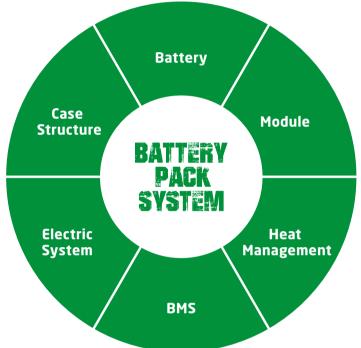
Lead-acid batteries 8-10 hours 100%

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_cciency 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



