FAMBITION
QINGDAO FAMBITION HEAVY MACHINERY CO.,LTD.

FT45B TECHNICAL SPECIFICATION



High-efficiency Equipment, Made by FAMBITION

FT45B lithium battery-powered mining truck is designed for ore loading and transportation in non-coal underground mines, with a standard dump box of 22 m³.

Features:

- Crafted from high-quality alloy steel and featuring a central articulated structure design with enhanced treatment in key components, advanced machining process, heat treatment process, and innovative design, to ensure that the body structure is sturdy and durable
- CAN-bus communication technology for self-diagnosis of faults and real-time monitoring of vehicle operation status to ensure safe operation of systems
- Enclosed air-conditioned cabin with FOPS/ROPS certification, sound absorbent materials to reduce noise, and cabin mounted on rubber mounts to frame to reduce vibrations
- Reverse camera to ensure safe vehicle operation
- 1.2 hours' charge for 3-4 hours of continuous operation; power protection and energy feedback functions, which effectively extend battery lifespan and enhance endurance

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Address: No.31, Beijing East Road, Longshui Subdistrict Office, Laixi City, Qingdao, Shandong, China.
E-mail: info@fambition.com Tel: +86(532)87900000 Website: Http://www.fambition.com

Basic dimensions	
Max. length	10 696 mm
Max. width	3 180 mm
Height	2 899 mm
Dumping angle	62°
Dump position max. height	6 113 mm
Ground clearance	458 mm
Steering angle	±42.5°
Inner turning radius	5 067 mm
Outer turning radius	9 140 mm

Operating weights	
Total operating weight	41 500 kg
Front axle load	30 360 kg
Rear axle load	11 140 kg
Loaded weights	
Total loaded weight	86 500 kg
Front axle load	43 050 kg
Rear axle load	43 450 kg
Dumping time	14.0 sec

Production capacity	
Standard dump box (SAE)	22 m^3
Payload capacity	45 000 kg
Maximum traction force	400 kN
Grade ability	15°

Speeds forward & reverse (level/loaded)	
Speed range	0～20 km/h

Operational conditions	
Environmental temperature	-20℃~+50℃
Standard operating altitude	-1500 m~+3000 m @ 25℃ No power loss

Design standards
AQ 1043-2007 Mining Products Safety Label
GB 20891-2014 Limits and Measurement Methods for Exhaust Pollutants from Diesel Engines of Non-road Mobile Machinery
GB 21500-2008 Trackless Tyred Mining Truck for Underground Mines—Safety Requirements
GB 7679.4-2005 Mining Machinery Terminology—Part 4: Mine Hauling Equipment
JB/T 8436-2015 Tyred Mining Truck for Underground Mines
JB/T 5946-1991 Construction Machinery—General Technical Specifications for Painting

Battery power system	
Battery type	$LiFePO_4$
System nominal energy	603.2 kWh
System nominal voltage	614.4 V
System nominal capacity	982 Ah
Operating charging temperature range	-5℃～60℃
Operating discharging temperature range	-30℃～60℃
Heating method	Electric heating
Cooling method	Liquid cooled
Control voltage	24 V
PACK degree of protection	IP68

Power train	
Drive motor	
Motor model	EM010290
Motor number	2
Motor power	200 kW/250 kW
Motor peak rpm	6 000 rpm
Motor torque	1 200 Nm/1 600 Nm
Reducer gearbox	Kessler Single-Speed
Gear shifting type	Direct electric motor drive
Axle	Kessler D106 SAHR, standard differentials Rear axle fixed, front axle oscillating ±8°
Tires	29.5R25

Cabin (enclosed)
FOPS/ROPS certification

Heating, ventilation, and air conditioning (HVAC)
Two-sided laminated glass window
Sound absorbent material to reduce noise
Cabin mounted on rubber mounts to frame to reduce vibrations
Emergency exit
Three-point contact access system to quickly get into the cabin
Emergency stop switch
Grammer low frequency suspension seat
Two-point seat belt
Door interlock

Hydraulics	
Hydraulic motor	
Motor model	UM130H37
Motor power	162 kW/310 kW
Motor peak rpm	4 500 rpm
Motor torque	740 Nm/1380 Nm
Degree of protection	IP67
Steering hydraulics	
Fully hydraulic pilot proportional control Two-stage telescopic double-acting hydraulic cylinder with adjustable steering unit Oil flows to the dump box hydraulic system from the pump when the steering system is not in use.	
Steering cylinder	Ø125 mm, 2 pcs
Steering pump	Variable displacement piston pump
Dump box hydraulics	
Hydraulic pilot proportional control Oil flows to the dump box hydraulic system from the pump when the steering system is not in use.	
Lift cylinders	Ø160 mm, 2 pcs
Main valve	Parker
Brakes	
Charging valve	Parker
Service brake valve	Mico
Brake accumulator	Parker
Cooling system	
Motor/electric control radiator	Electric fan
Steering&working pump	Parker variable displacement piston pump
Battery system cooling	Battery thermal management system
Hydraulic oil tank	
Hydraulic oil tank	225 L (Parker oil return filter)
Brake oil tank	100 L (Parker oil return filter)

Electrical system	
Circuit breaker	ABB
Electric relay	Bosch
Connector	TE
Controller	EPEC
Joystick	Caldaro
FAMBITION electrical technician (FET) technology	Real-time monitoring of system operation
	Fault alarm
	Log files
Warning	Indicator lights
Display	EPEC 7" color display
	Adjustable lightness
	Language options including Chinese, English, Russian and Spanish

Options
Dump box without tailgate
Pneumatic suspension seat
HYDAC electrical filling pump
Manual/automatic integrated fire protection
In-cab monitor
Automatic central lubrication system
Integrated weighing system
Arctic package (preheater for hydr. oil tank and engine block)
Harmful gas detection
Neutral gear brake
Driving direction lights (red/green)
20 m^3, 26 m^3 dump box
Toolbox in cabin
Wheel chock

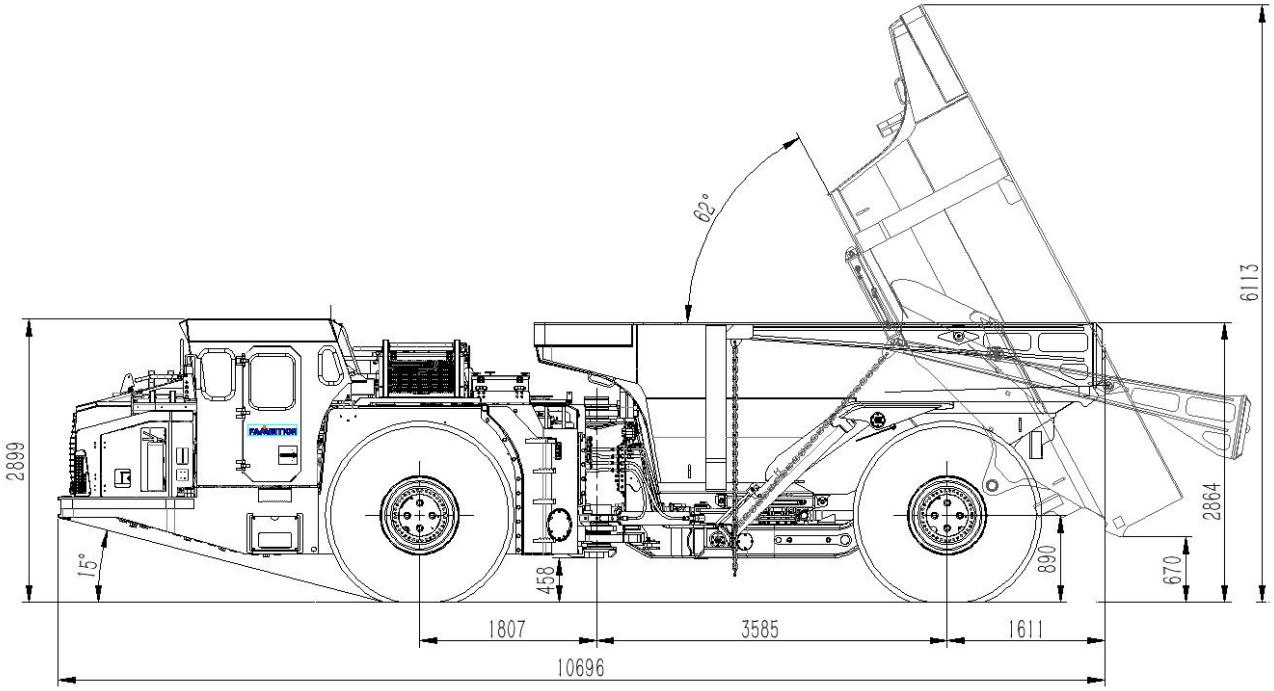
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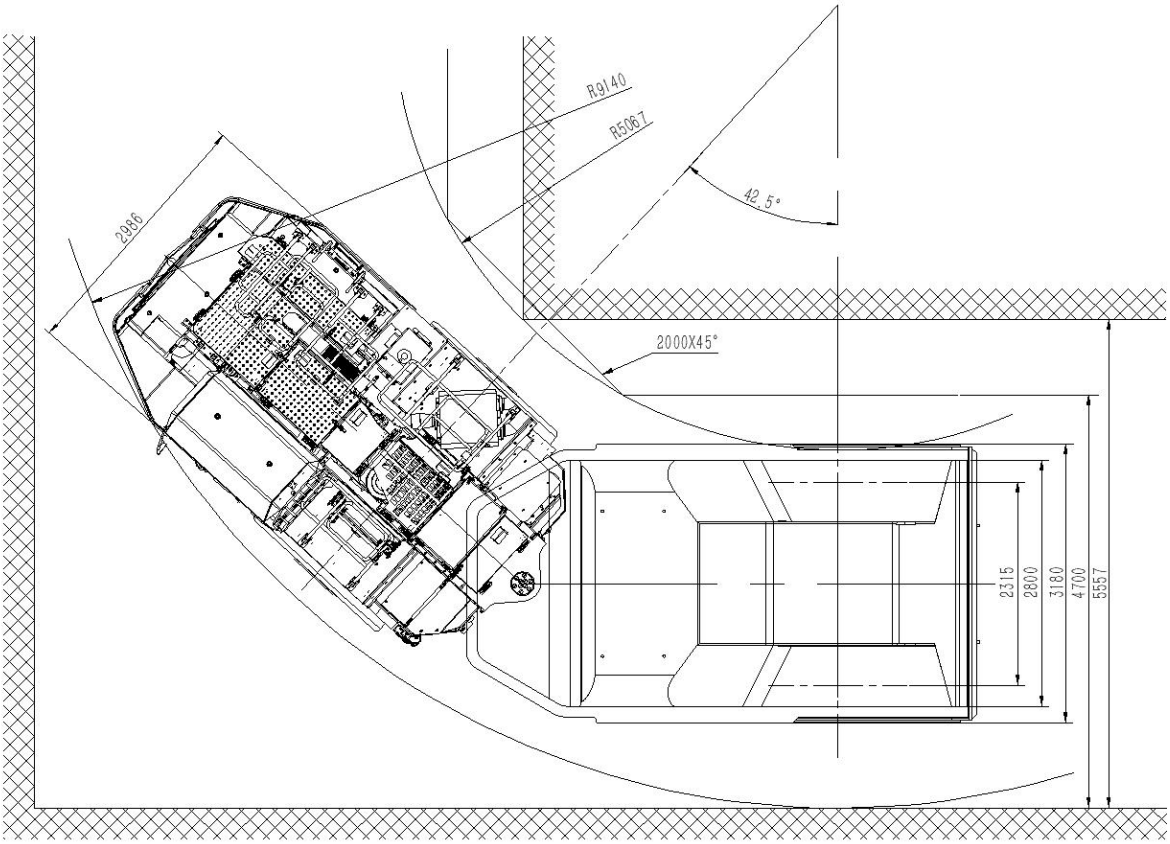
Safety	
Flashing beacon	1 set
Portable fire extinguisher	1*12 kg
Alarm horn&back-up alarm	Ecco 107 dB
Working lights LED	10*20 W
Turning signals& brake lights	4 pcs
Reverse camera	1 set
Supporting bar for repair	2 pcs
Emergency stop button	1 pc in the cabin; 4 pcs on the outside
Articulation lock pin	1 pc
Lifting buzzer	1 pc
Driving indicator lights	1 set

Manuals	
Spare parts manual	Chinese/English
Operation and maintenance manual	Chinese/English
Electronic manual	USB stick in pdf Format

FT45B grade&speed													
Working face slope (°)	0	1	2.5	3.5	5	6	7.2	8.2	9.5	10.3	11.5	13	15
Working face curvature (%)	0	2	4	6	8	10	12.5	14	16	18	20	23	26
Empty (km/h)	18.24	18.24	18.24	18.24	18.24	18.24	18.24	18.24	18.24	18.24	18.24	17.2	19.9
Loaded (km/h)	18.24	18.24	18.24	18.24	18.24	18.24	18.24	18.24	16.8	15.7	14.3	12.9	8.3

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