FAMBITION
QINGDAO FAMBITION HEAVY MACHINERY CO.,LTD.

FL155 TECHNICAL SPECIFICATION



High-efficiency Equipment, Made by FAMBITION

FL155 is an underground electric LHD specially designed for mining conditions. With a rated payload capacity of 15 tonnes, it is mainly used for ore loading and haulage in underground non-coal mines. This model features a compact structure and powerful performance, suitable for tunnels with a cross-section of 4.5 m*4.0 m or larger, making it an ideal piece of equipment for improving mine transportation efficiency and ensuring operational stability.

Features:

- Internationally renowned brand diesel engine with stable power output, complying with China IV/Euro Stage V emission standards.
- Fully electric control joystick with highly integrated control functions for simple operation and fast response
- Load-sensing hydraulic system with variable displacement piston pumps for high efficiency and energy saving
- Extensively used hard piping, with rational layout for excellent heat dissipation and long service life
- Internationally renowned brands for key drive train, transmission, hydraulic and electrical components, aiming at mature and reliable performance
- CAN-bus technology and modular control design with simplified wiring for better anti-interference communication
- Independently developed FET (FAMBITION Electronic Technician) for real-time monitoring of engine, drive train, hydraulic and electrical systems

Version number: 202601
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	
Length (bucket on ground)	11 278 mm
Length (bucket retracted)	10 883 mm
Maxi. width	2 820 mm
Height	2 580 mm
Max.dumping height	2 360 mm
Dumping distance	1 584 mm
Ground clearance	387 mm
Steering angle	±42.5°
Inner turning radius	3 635 mm
Outer turning radius	7 264 mm

Operating weights	
Total operating weight	42 000 kg
Front axle load	18 000 kg
Rear axle load	24 000 kg
Loaded weights	
Total loaded weight	57 000 kg
Front axle load	42 000 kg
Rear axle load	15 000 kg
Motion time	
Raising time	7.0 sec
Lowering time	4.0 sec
Dumping time	2.3 sec

Production capacity	
Standard bucket (SAE)	6.3 m^3
Payload capacity	15 000 kg
Maximum breakout force	240 kN
Maximum traction force	300 kN
Grade ability	23 %

Speeds forward&reverse (level/loaded)	
1st gear	4.6 km/h
2nd gear	9.5 km/h
3rd gear	15.6 km/h
4th gear	27.4 km/h

Operational conditions	
Environmental temperature	-20°C~+55°C
Standard operating Altitude	-1500 m~+3000 m @ 25°C

Engine	
Brand&model	Volvo TAD1181VE
Rated power	265 kW @ 2 100 rpm
Output torque	1 795 Nm @ 1 400 rpm
Cylinders	Inline six-cylinder
Displacement	10.8 L
Cooling system	Water cooled
Combustion principle	4-stroke, electric fuel injection with turbo
Air intake system	Two stage filtration, dry type, air-cooler
Operating voltage	24 V
Emissions standard	China IV, Euro Stage V
Ventilation rate (ULSD)	Canmet 9.96 m^3/s, MSHA 16 000 CFM
Particulate index (ULSD)	MSHA 10 500 CFM
Exhaust system	DOC+DPF+SCR+ASC
Average fuel consumption (at a 50% load)	28 L/h
Fuel tank refill capacity	500 L
Radiator	Detachable copper tube radiator
Optional engine	Volvo TAD1351VE 285 kW @ 1 900 rpm 1 965 Nm @ 1 200 rpm Inline six-cylinder Tier 3, Euro Stage III A

Power train	
Integrated torque converter and transmission	Dana TE32
Up box	Reastar
Gear shifting type	Electrical gear shift control, Manual/automatic
Axles	Kessler D106
	SAHR, limited slip differentials

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	Front axle fixed Rear axle oscillating ±8°
	Concentric electric pump for emergency brake release
Tires	26.5 R25

Cabin (enclosed)
Fully enclosed side-mounted cabin
FOPS certified in accordance with ISO 3471
ROPS certified in accordance with ISO 3449
Cooling-only air conditioning with fresh air system
Two-sided laminated glass window
Sound-absorbing, noise-reducing and heat-insulating interior
Trelleborg rubber shock absorption
Multi-angle adjustable control handle
Fully electric controlled cabin
Emergency outward-push escape window
Three-point contact access system to quickly get into the cabin
Emergency stop switch
Grammer electric pneumatic suspension seat (with OPS)
Three point safety belt
Cabin door safety interlock
Built-in air conditioning duct
Footbox
High/low speed wipers

Hydraulics	
Steering hydraulics	
Electro-hydraulic pilot proportional control Load-sensing hydraulic system with variable displacement piston pumps The oil flow from steering hydraulic pump is directed to bucket hydraulics when steering is not used.	
Steering cylinder	Ø125 mm, 2 pcs
Steering valve	Parker
Boom&bucket hydraulics	
Electro-hydraulic pilot proportional control Load-sensing hydraulic system with variable displacement piston pumps to save energy and improve work efficiency	
Lift cylinders	Ø160 mm, 2 pcs
Dump cylinder	Ø220 mm, 1 pc
Main valve	Parker
Brakes	
Charging valve	Sun
Brake accumulator	HYDAC
Service brake valve	Mico
Service brake pump	Parker gear pump
Cooling hydraulics	
Radiator	Parker
Steering&engine cooling pump	Parker tandem variable displacement piston pumps
Working&hydraulic oil cooling pump	Parker tandem variable displacement piston pumps
Hydraulic oil tank	260 L
Brake oil tank	75 L
Other	O-LOK fitting, wear-resistant flame retardant sheath, galvanized nickel steel pipe
	Electric pump brake release system
	Hydraulic oil drain-off pipe

Electrical system	
Generator	28 V, 110 A
Battery	2*12 V, 150 Ah
Starter	24 V, 5.5 kW
Joystick	Caldaro
Circuit breaker	ABB
Electric relay	Bosch
Connector	TE
Controller	EPEC 4602
360° around view monitor	
FAMBITION electrical technician (FET) technology	Real-time monitoring of system operation
	Fault diagnosis prompts
	Fault indicator light
	Historical fault records
Display	EPEC 7" color display
	Adjustable display brightness
	Language options including

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	Chinese, English, Russian and Spanish
Warning	Indicator lights

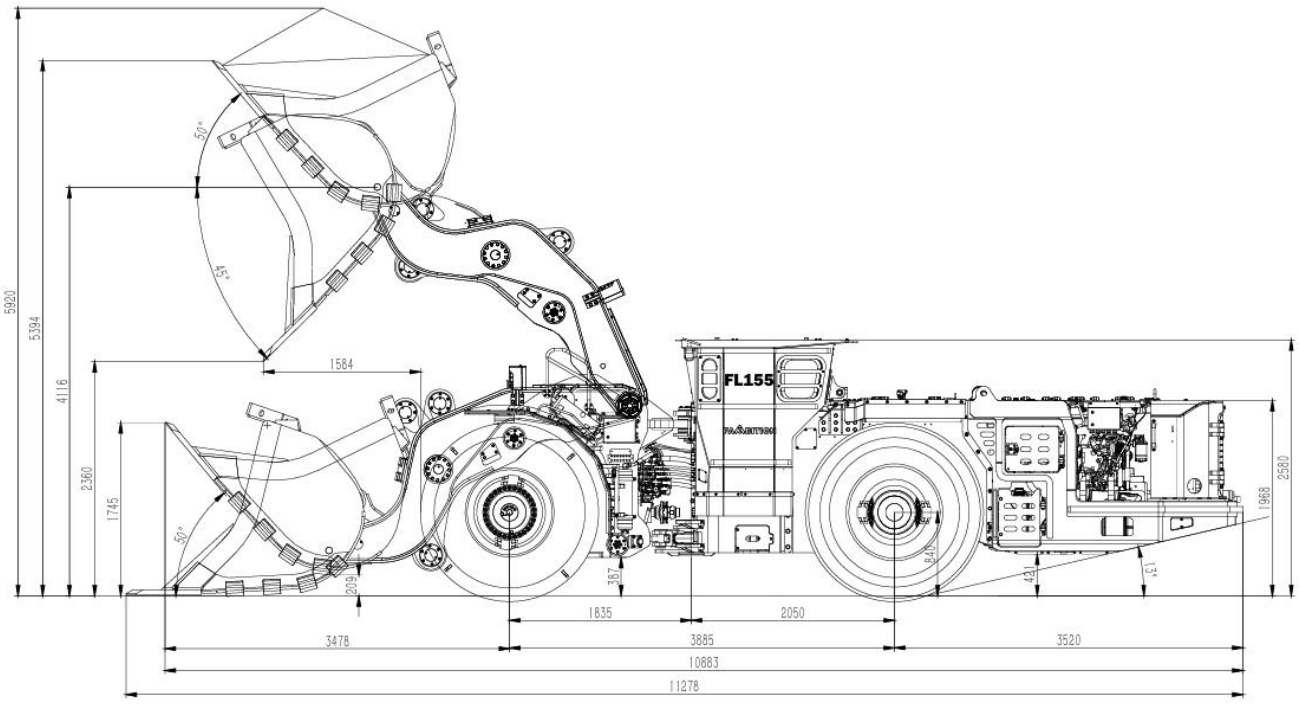
Options
6.3 m³ GET bucket
Emergency steering
Ride control
Integrated weighing system
Retrieval hook (hydraulic brake release by pulling the hook)
Electric filling pump
Hydraulic oil testing
Offline hydraulic oil filtration system
Heating, ventilation and air conditioning (HVAC)
Tele-remote control system
In-cab monitor
Harmful gas detection
Vehicle backup camera
Trailer socket
Proximity detection system (PDS)
FAMBITION Data Transmission System
Tire pressure monitoring
Disable 4th gear
Automatic central fire suppression system
Arctic package (preheater for hydr. oil tank and engine block)

Safety	
Portable fire extinguisher	1*12 kg
Emergency stop push button	1 pc in the cabin; 2 pcs on the rear frame
Boom lock pin	2 pcs
Articulation lock pin	1 pc
Line of sight radio remote control	1 set
Neutral gear braking system	1 set
Automatic central lubrication system	1 set
Safety guardrail	1 set
Flashing beacon	1 pc
LED lamp	7 pcs on front frame 7 pcs on cabin 6 pcs on rear frame

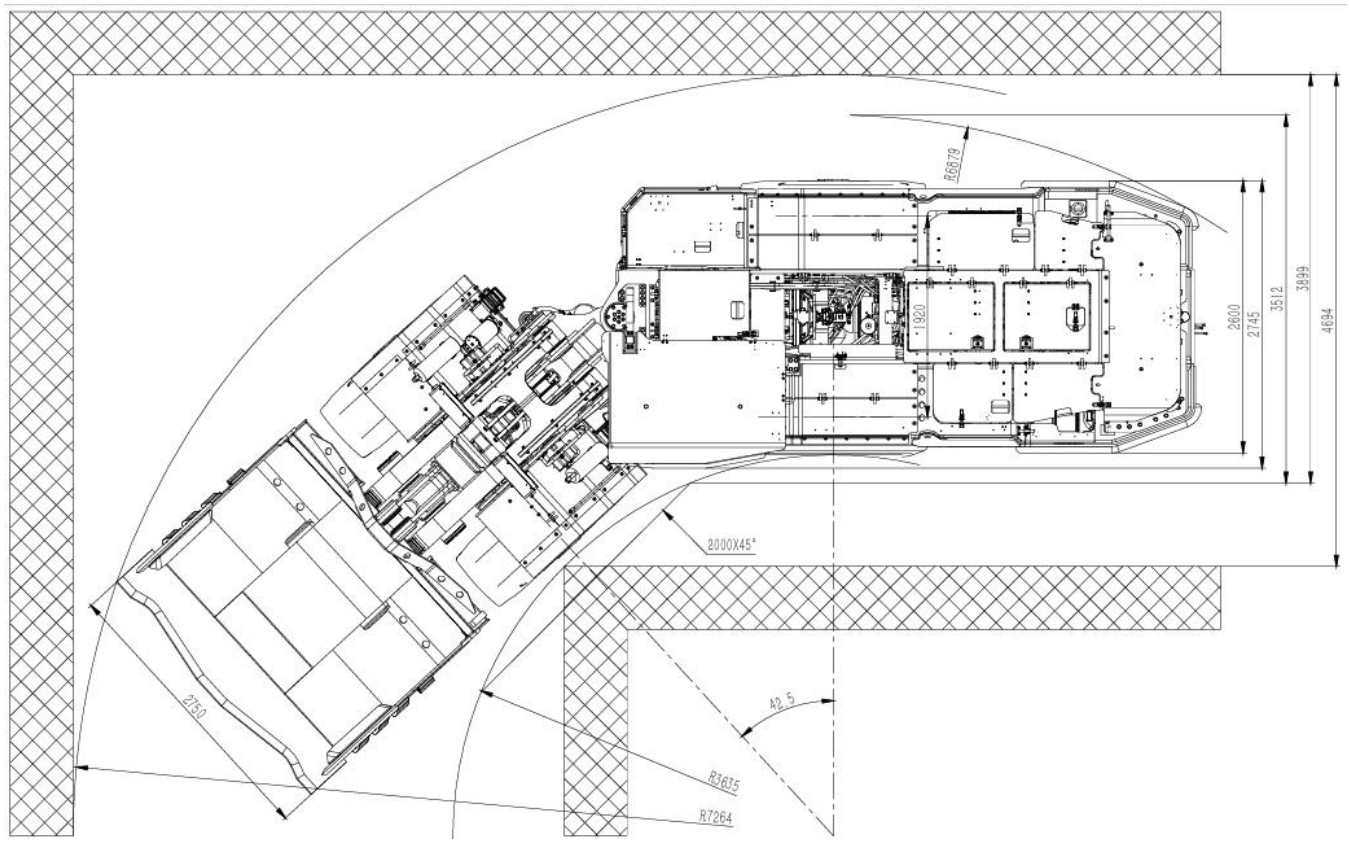
Manuals	
Spare parts manual	Chinese/English/Russian/Spanish version
Operation and maintenance manual	Chinese/English/Russian/Spanish version
Electronic manual	USB stick in pdf format

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FL155 grade&speed									
Empty									
Percent grade	0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	17.0
Ratio					1:12	1:10	1:08	1:07	
1st gear (km/h)	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1
2nd gear (km/h)	9.5	9.3	8.8	8.6	8.3	7.8	7.4	7.2	6.8
3rd gear (km/h)	15.6	15.3	14.8	14.4	13.8	13.0	11.3	9.5	7.3
4th gear (km/h)	27.4	26.4	24.4	19.9	15.4	11.4			
Loaded									
Percent grade	0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	17.0
Ratio					1:12	1:10	1:08	1:07	
1st gear (km/h)	4.6	4.5	4.5	4.4	4.4	4.2	4.2	4.2	4.1
2nd gear (km/h)	9.5	9.2	8.9	8.7	8.2	7.9	7.0	6.3	5.0
3rd gear (km/h)	15.6	14.8	14.0	12.7	10.2	7.8	5.6	3.5	
4th gear (km/h)	27.4	24.9	16.8	8.5					



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Parameters may vary due to different customer requirements.
Qingdao Fambition Heavy Machinery Co., Ltd. reserves the right of final interpretation.

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同舟共济 追求卓越

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