FAMBITION
QINGDAO FAMBITION HEAVY MACHINERY CO.,LTD.

FL105+ TECHNICAL SPECIFICATION



High-efficiency Equipment, Made by FAMBITION

FL105+ underground diesel LHD is designed for ore loading, hauling and dumping in non-coal underground mines, with a payload capacity of 10 tons, suitable for tunnels with the dimension of 3.8 m (width) * 3.5 m (height) or larger.

Features:

- Compact appearance design and reinforced key components with structural component main plates of Q550D and high dumping height for high bucket fill factor
- All parts from world-renowned brands including high performance integrated torque converter-transmission unit to ensure stable operation
- Cabin footbox, suspended accelerator pedal, toolbox and cup holder to enhance driving comfort
- Highly integrated electric control joystick for easy operation and quick response
- One-stop maintenance system and maintenance-free drive shaft to ensure excellent maintenance convenience
- Load-sensing hydraulic system with variable displacement piston pumps and independent brake pump for brake system charging to ensure high efficiency and energy saving
- 80% of the pipe adopting stainless steel pipe technology with an aesthetically pleasing layout and longer service life
- Radiator with replaceable copper pipes for better heat dissipation
- CAN-bus technology for less wiring and better anti-interference communication
- FET electronic technician for real-time monitoring of equipment faults in engine, transmission system, hydraulic system, and electrical system to ensure driving safety

Version number: 20260120
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

- Self-developed production management system, including vehicle operation status monitoring, production operation management, vehicle alarm management, vehicle maintenance management, etc.

Basic dimensions	
Length (bucket on ground)	10 198 mm
Length (bucket retracted)	9 857 mm
Max. width	2 733 mm
Height	2 400 mm
Max. dumping height	2 334 mm
Ground clearance	385 mm
Steering angle	42.5°
Inner turning radius	3 316 mm
Outer turning radius	6 646 mm

Operating weights	
Total operating weight	31 600 kg
Front axle load	12 300 kg
Rear axle load	19 300 kg
Loaded weights	
Total loaded weight	41 600 kg
Front axle load	27 400 kg
Rear axle load	14 200 kg
Motion time	
Raising time	6.3 sec
Lowering time	4.2 sec
Dumping time	2.6 sec

Production capacity	
Standard bucket (SAE)	4 m^3
Payload capacity	10 000 kg
Maximum breakout force	200 kN
Maximum traction force	270 kN
Grade ability	25 %

Speeds (4 gears forward & 3 gears reverse, level/loaded)	
1st gear	4.4 km/h
2nd gear	10.5 km/h
3rd gear	22.3 km/h
4th gear	25.0 km/h

Operational conditions	
Environmental temperature	-20℃~+50℃
Standard operating altitude	-1500 m~+ 2000 m @ 25°C

Engine	
Brand&model	Volvo TAD883VE
Rated power	235 kW @ 2 200 rpm
Output torque	1 330 Nm @ 1 400 rpm
Cylinders	Inline six-cylinder
Displacement	7.70 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	CN 4, Euro Stage V
Ventilation rate (ULSD)	Canmet 8.07 m^3/s MSHA 16 000 CFM
Particulate index (ULSD)	MSHA 5 500 CFM
Exhaust system	DOC+DPF+SCR+ASC
Average fuel consumption (at a 40% load)	26 L/h
Fuel tank refill capacity	310 L
Urea tank	17.6 L

Power train	
Torque converter & transmission	Germany ZF 4WG260
Gear shifting type	Electrical gear shift control Manual/automatic
Axles	Kessler D102
	SAHR, limited slip differentials
	Front axle fixed, Rear axle oscillating ±8°
	Electrical traction control
Tires	18.00-25-32.SS.L-5S.TL

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Cabin (enclosed)
FOPS/ROPS certification
Footbox
Cold air conditioning system
Two-sided laminated glass windows
Sound absorbent material to reduce noise
Cabin mounted on rubber mounts to the frame to reduce vibrations
Adjustable joystick
No high pressure hoses in the operator’ s compartment
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
Wiper with adjustable speed

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	Rexroth
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	Ø200 mm, 1 pc
Main valve	Parker
Brakes	
Charging valve	SUN
Service brake valve	MICO
Brake accumulator	HYDAC
Cooling hydraulics	
Hydraulic oil radiator	Parker
Steering&engine cooling pumps	Rexroth tandem variable displacement piston pumps
Boom and bucket &hydraulic oil cooling pump	Rexroth tandem variable displacement piston pumps
Hydraulic oil tank	240 L
Brake oil tank	57 L
Others	Electric pump for brake release system
	O-LOK connector
	Zinc-nickel electroplating
	Flame retardant sheath for hydraulic hoses

Electrical system	
Joystick	Caldaro
Circuit breaker	ABB
Electric relay	Bosch
Connector	TE
Controller	EPEC SL84
FAMBITION electrical Technician (FET) technology	Real-time monitoring of system operation
	Fault alarm
	Log files
Display	7” EPEC 6807 color display
	Adjustable lightness
	Language options including Chinese, English, Russian and Spanish
Warning	Indicator lights

Options
Remote control system
G.E.T.
Metal wheel choke
Pneumatic suspension seat
Retrieval hook (Hydraulic brake release by pulling the hook)
Emergency steering
Ride control system (including boom floating and ride control)
Electric filling pump
Hydraulic oil online monitoring

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Integrated weighing system
Line of sight radio remote control
In-cab monitor
Tyre pressure monitoring system
Harmful gas detection
Around view monitor
Jump start
Air conditioning&heating
Selectable highest gear
Protecfire automatic centralized fire protection
Arctic package (preheater for hydr. oil tank and engine block)
Production management system

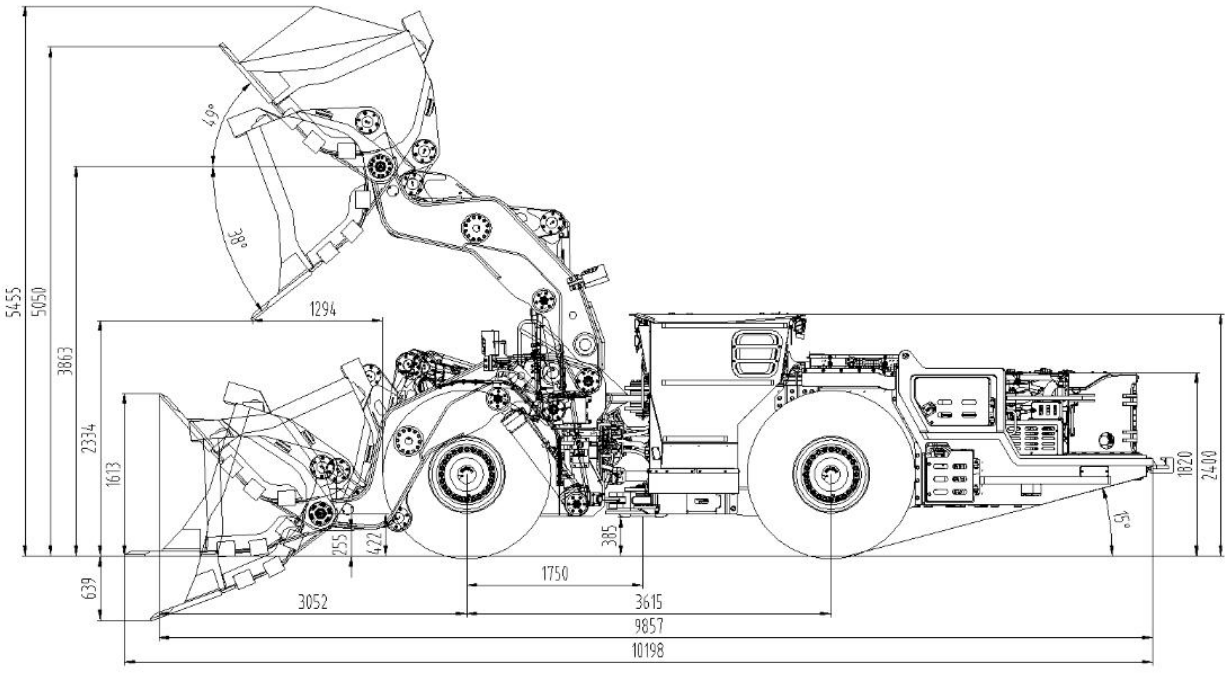
Safety	
Portable fire extinguisher	1*8 kg
Emergency stop push button	1 pc in the cabin; 2 pcs on the rear frame
Boom lock pin	2 pcs
Articulation lock pin	1 pc
Line of sight radio remote control	Optional

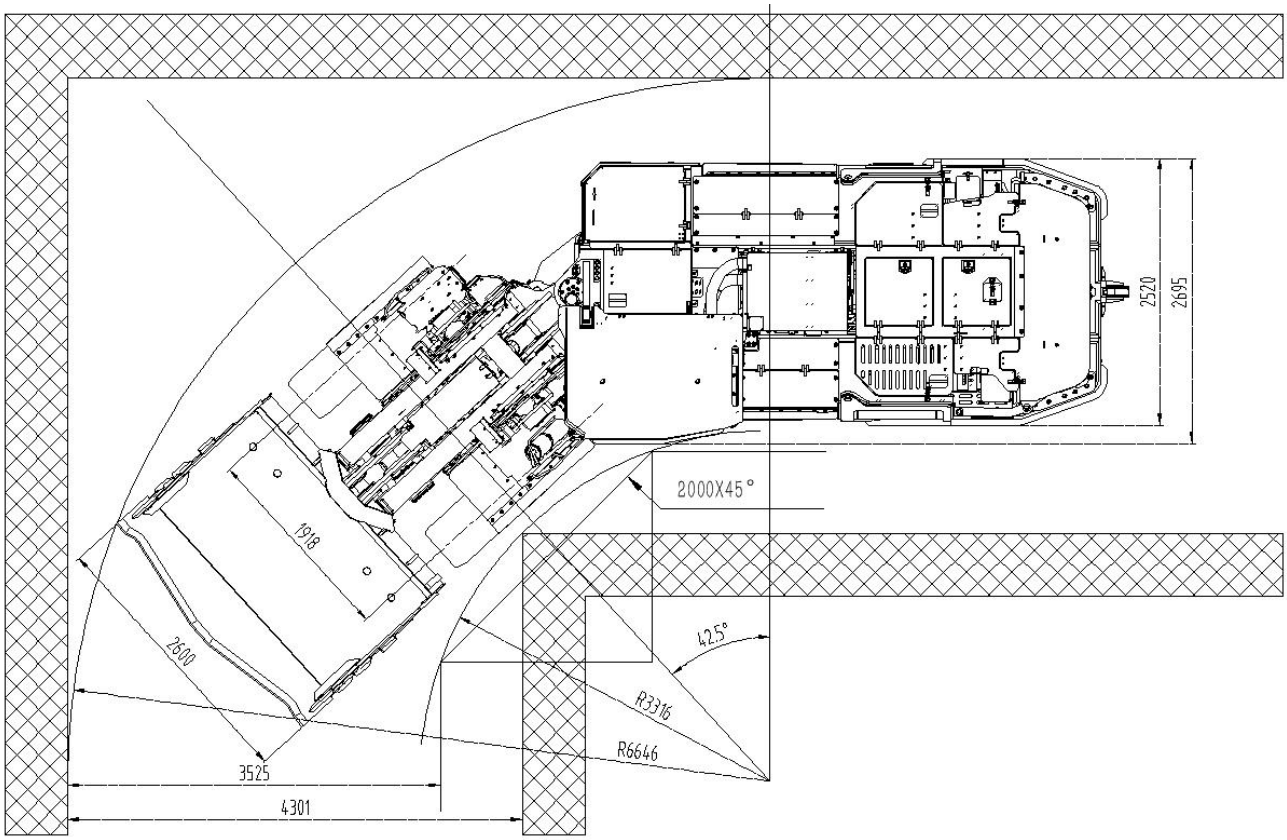
Manuals	
Spare parts manual	Chinese/English
Operation and maintenance manual	Chinese/English
Electronic manual	USB stick in pdf Format

FL105+ grade&speed (4 gears forward & 3 gears reverse)									
				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)	5.2	4.8	4.5	4.3	4.2	4.2	4.2	4.0	3.9
2nd gear (km/h)	10.1	9.5	8.5	8.3	8.1	7.6	7.2	6.9	6.3
3rd gear (km/h)	17.1	15.9	14.3	12.5	11.8	10.0	8.1	7.0	4.0
4th gear (km/h)	25.0	22.8	20.0	14.3	11.0	5.0			
				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)	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7
2nd gear (km/h)	8.8	8.5	8.0	7.5	7.3	7.0	6.3	5.5	4.6
3rd gear (km/h)	14.7	13.7	12.5	11.2	9.0	7.0	4.0	1.6	
4th gear (km/h)	25.0	21.0	14.5	8.4					

Available buckets				
Volume	m^3	4.0	4.0 (G.E.T.)	5.4
Max. material density	(t/m^3)	2.5	2.5	2.0
Width	mm	2 600	2 650	2 600

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Subject to change without further notice!

United in progress. Striving for excellence.

同舟共济 追求卓越

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