

miniLoader[®]

L 140B

BATTERY Powered



Safety



Power



Comfort



Operating life

A NEW ERA FOR UNDERGROUND



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INNOVATION



BATTERY PACK “PLUG AND LOAD”

Each machine has two robust battery packs, in waterproof stainless steel boxes, with charging cooler and integrated charger.



CHARGE
220V
50/60 Hz
4KVA

7 BATTERIES
& operation
module

COOLER
during
charging

QUICK
Replacement

OPTION “BATTERY QUICK REPLACEMENT SYSTEM”

Unlimited operation of the machine by changing battery modules

EXCLUSIVE SYSTEM! Additional Battery Module, for full shift, full day or full time autonomy. Changing battery is now faster than filling fuel tank with the Aramine W Optional Battery Replacement Bench with Crane.

PROVEN AND RELIABLE HIGH TECHNOLOGY

The L140B, especially thought for narrow vein mines, is designed with the best components from recognized brand. The machine doesn't need maintenance; without hydrostatics, with a simplified electrical transmission and a low heating, it has a longer lifetime.



SELF
ALIGNING

AUTO
LOCKING
DEVICE

W TYPE
ALIGNING
SYSTEM



SPECIFICATIONS

CAPACITIES

Tramming Capacity	1 300 kg
Static Tipping Load	30 kN
Breakout Force, tilt (SAE)	30 kN
Breakout Force, lift (SAE)	35 kN
Tractive Effort	32 kN
Empty weight	4700 kg
Empty	Front 1 100 kg / Rear 3 600 kg
Loaded	Front 3 100 kg / Rear 2 900 kg
Standard bucket volume	0,7 m ³

Density (t/m ³)	1.6	1.9	2.2
Volume (m ³)*	0.8	0.7	0.6
Vwidth (mm)	1 100	1 100	1 100

* Heaped SAE

PRODUCTIVITÉ & AUTONOMIE

4H* average 5km/h	2 to 5% grade up loaded	100m tramming distance x2	1 PASS loading
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→ 15t/hour ≈ 1 blast

*3 to 5 hours depending on operator & Application

SPEED

Vehicle Speed loaded	0 to 7 km/h
Boom speed	Raising 4,1s / Lowering 2,6 s
Bucket Speed	Roll back 3,6 s / Dumping 5,6 s

TIRES

- Deep Lug tire for Mining application MICHELIN, 7.5R15 Xmine D2
- Mounted on demountable rims

TRANSMISSION

The L140B miniLoader was designed to remove the hydrostatic transmission and related systems. This has been achieved by the new design of an electrical directional controller. Electric asynchronous motor 25kW mounted on rear axle through belt type reducer and spring applied hydraulic release brake. Auto battery recharge while decelerating & breaking cycle.

MOTOR & ENERGY

- Electric Motor
- 2 x Leroy Somer 25kW motors
- 1 for Tramming & 1 for hydraulic
- Same motors for easy maintenance & less inventory
- Liquid cooled motors for stability in high temp environment.
- Batteries **24kWh LiFe PO4 (90V - 270 Ah)**
- 2 x pack 12kWh (250kg/pack) with integrated charger
- Recharge **4 hours with 220V**
- Replace battery packs ≈ **20min with Battery QRS**

HYDRAULIC SYSTEM

- Suction strainer 100 microns
- Return & Suction filter 10µ with replaceable element
- Fluid ISO VG32
- Gear type pump powered by an electric motor
- Electronic Pilot Steering & Bucket Controls
- Hydraulic Cylinders, double acting type:
 - One (1) for Stab with bucket stab link
 - One (1) for Hoist
 - One (1) for Steering

ELECTRIC SYSTEM

- Sealed electrical system with replaceable harness
- 2 batteries 12V 17Ah for wake up with self charge
- Accessories: 24V
- 2 Front & 2 Rear LED lights
- 4.3' Display for diagnostic & function

OSCILLATION

Rear axle mounted on oscillation frame with 12° articulation (6° in each side)

OPERATOR'S COMPARTMENT

- Side Seated Operator, for better visibility in both directions
- Seat with suspension, and safety belt
- Ergonomic built-in armrests adjustable with Joystick controls
- Ergonomic Control panel with 4,3' display for Diagnostic & Functions
- ROPS/FOPS Certified bolted Canopy with Back Protection
- Steering direction controlled by left joystick
- Bucket controlled by right joystick
- Forward/Reverse/Neutral control buttons on left joystick
- Right foot pedal for tramming speed control
- Operator's door with large opening in narrow clearance

BRAKES

- Service : Electrical brake control with additional enclosed multi disc brake (Spring Applied Hydraulic Release) for service brake & immobilisation.
- Parking & Emergency : LCB multi-discs brake mounted in rear Axle (Spring Applied Hydraulic Release).
- Manual actuation by operator and automatic actuation in case of hydraulic or electric energy loss.

FRONT AND REAR AXLES

- Front & Rear axles, Aramine A5086 Series
- Front: Rigid axle with wheel end planetary and Nospin differential lock type
- Rear: Oscillating mounted axle with wheel end planetary and standard differential
- Dropbox mounted on rear axle

TANK CAPACITY

- Battery powered miniLoader allows removal of fuel and transmission tanks. Only hydraulic tank is required
- Hydraulic 50 L (Welded to frame)

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HIGH TECH



- Integrated microSD to collect all data and analyze the machine functions
- Adapt easily the machine to your mine conditions with our engineers

BATTERIES



- LITHIUM IRON PHOSPHATE**
- 2000 cycles fully discharged at 100%
- INTEGRATED CHARGER**
- OPERATING LIFE 3-4H** in constant use
- CHARGING TIME 4H** in 220V

COMFORT AND ENVIRONMENT



EMISSION 0% CO₂

LOW NOISE

- Flexibility of use
- Ergonomic operator compartment with integrated and adjustable armrests
- Progressive acceleration and braking
- Oscillation with prestressed shock absorbers

POWER



TRACTION EFFORT 3,2t

INSTANT REACTIVITY

60% OF ITS MAX TORQUE

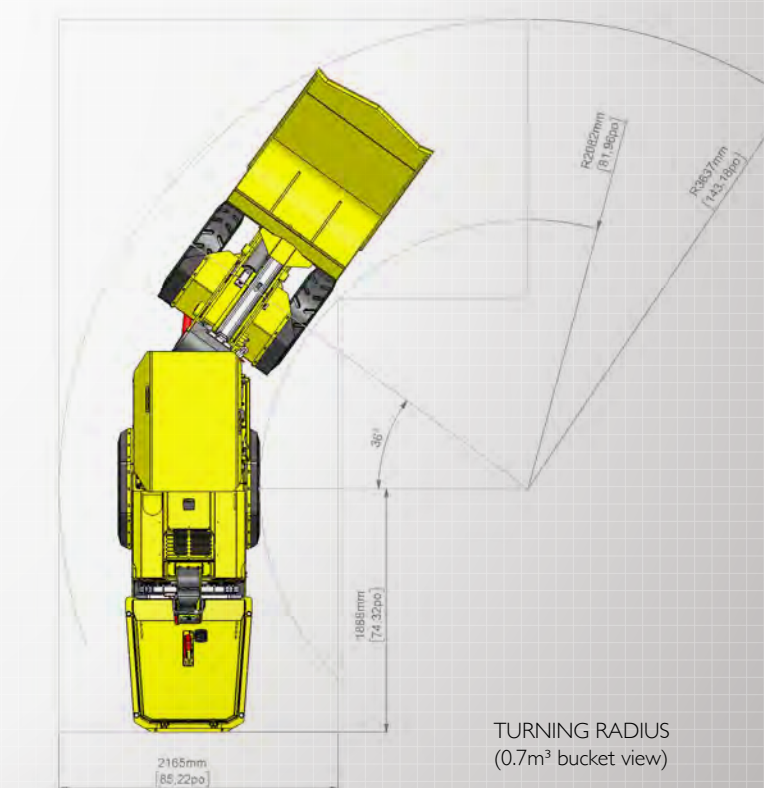
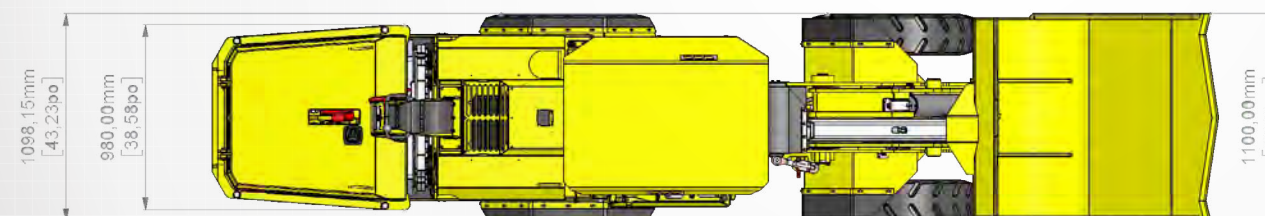
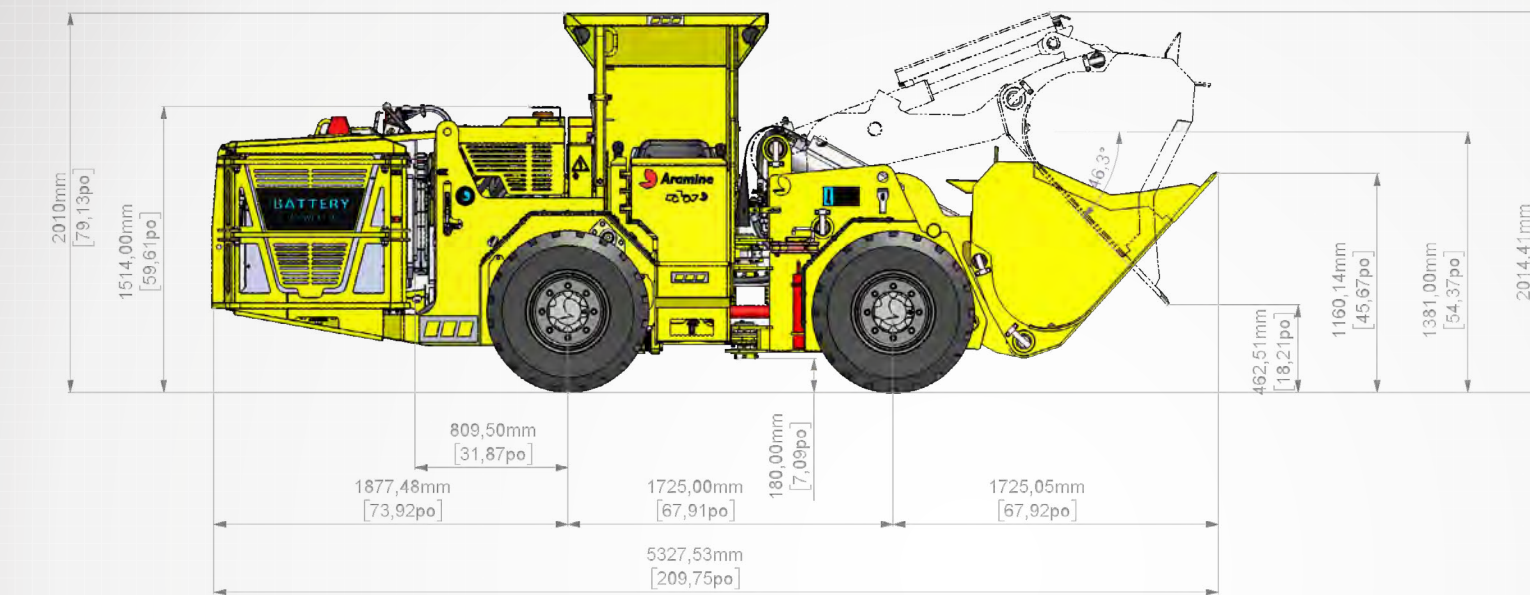
SAFETY



- MULTIDISC BRAKES SAHR***
- AUTOMATIC BRAKING**
- START UP CHECKING**
- LOW TEMPERATURE BATTERY**

- Automatic stop of the batteries in case of failure
- Extremely stable narrow machine
- Very safe operator compartments, with automatic locking of controls

*Spring applied hydraulic release



RELIABILITY



- PROUVEN COMPONENTS**
- UNDERGROUND USE**
- ALTITUDE ≥4000m**
- TEMPERATURE <35 TO 40°**

PERFORMANCES

STANDARD EQUIPMENTS

- Certified ROPS/FOPS Canopy over operator
- Operator compartment safety door
- Ergonomic and comfortable operator's compartment for enjoyable operation
- Dash Board with 4,3' display for system control and machine diagnostic
- Intuitive and ergonomic controls from joystick buttons for: Direction, Lights, Horn, and any option
- Can-bus type electrical system for easy diagnostics and programmation
- Electronic Pilot Operated joystick for Steering and Bucket Controls
- Electronic pedal for speed control
- LED type lights
- Direct Electric Drive Transmission
- Removable battery packs (2) in a sealed and solid stainless steel frame integrating batteries, electronic control monitor and charger
- LiFe PO4 battery, proven stability & reliability in toughest environment
- High level of safety integrated in all systems and designs
- All hoods are assisted by Gaz spring cylinder and locking device
- Safe and easy Central hinge locking device
- Safe and easy Boom raised locking device
- BackUp Audio/Visual Alarm
- Manual centralized lube system
- Repleacable inserts to central hinge, bucket and boom articulations
- Dump Cylinder Protection
- Complementary Service & Park Spring Applied Multi-disc brake
- Michelin 7,5 R 15 X-Mine D2

OPTIONS

- Automatic lube system
- Extinguisher
- Fire Suppression system ANSUL
- Radio Remote Control system
- Emergency Power Steering (electro-hydraulic)
- Bucket with high abrasive blades reinforcement
- EOD Ejector Blade Bucket
- Battery Quick Replacement System
- Battery Replacement Bench
- Adjustable canopy

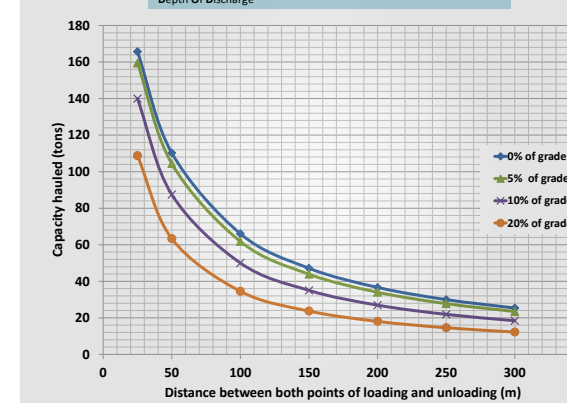
RECOMMENDED DRIFT SIZE

(Canopy mounted)

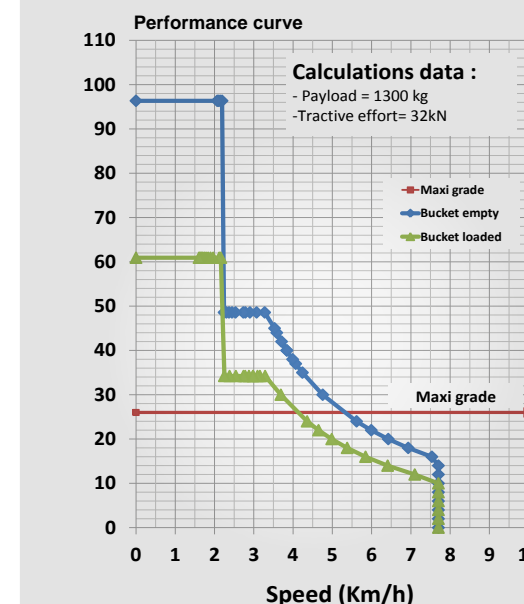


BATTERY AUTONOMY & PRODUCTION INT/H

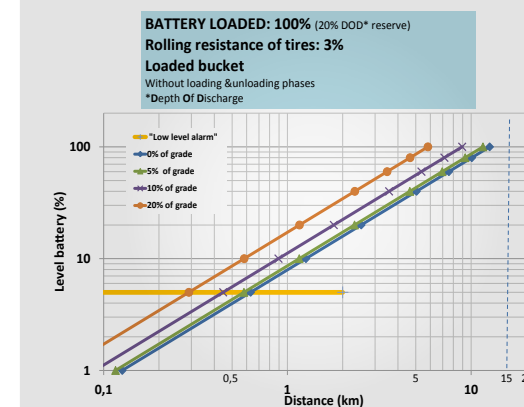
Capacity hauled
BATTERY DISCHARGE: 100% (Equivalent at 80% DOD*)
Rolling resistance of tires: 3%
LOADED IN CLIMB UP and EMPTY IN DOWNHILL
The haulage AVERAGE speed: 5 km/h
*Depth Of Discharge



SPEED ON GRADE



TRAMMING DISTANCE PER CHARGE





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Aramine joins the Global Compact of the United Nations and is committed to develop its Social Responsibility

