

# MINING LOADER L440B

BATTERY Powered

CAPACITY :

2,5m<sup>3</sup>

4,5T



SAFETY



POWER



COMFORT



OPERATING  
LIFE

A NEW STANDARD FOR  
UNDERGROUND MINING

 **Aramine**  
NEVER STOP MINING

# MINING LOADER L440B

**BATTERY Powered**

## QUICK BATTERY REPLACEMENT SYSTEM

Unlimited machine autonomy by changing the energy module



SELF  
ALIGNING

AUTO  
LOCKING  
DEVICE

COMPACT  
& ROBUST

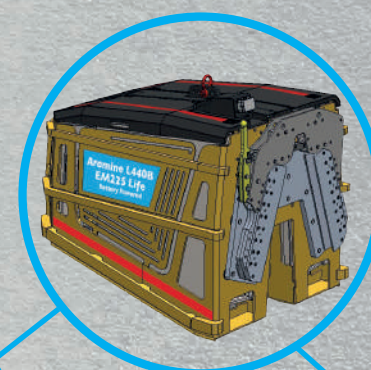
### EXCLUSIVE SYSTEM!

Additional energy module, for full shift, full day or full time autonomy. Changing battery is now faster than filling the fuel tank with the Aramine QRS technology. As a result, an L440B with 2 energy modules can operate without interruption.



## UNCOMPROMISING RELIABILITY

Each energy module has two robust battery packs, in waterproof stainless steel housing, with independent charging cooler and integrated charger. You can rely on your machine for continuous operations.



QUICK  
Replacement  
system

CHARGE  
360-530V  
(3P+PE)  
2x33kVA

COOLER  
during  
charging only

## THE WORLD'S SAFEST AND MOST COMPACT LHD WITH LIMITED EMISSIONS

Part of the new generation of underground mining loaders, the L440B is the only battery-powered machine in its class, available with a enclosed cab offering comfort and serenity in a challenging underground environment.

The very robust chassis design and combination of systems make it the most productive and efficient loader to safely increase your productivity in underground mines from 7 to 14 m<sup>2</sup>.

Comply  
to EC  
register



Designed  
& made in



# MINING LOADER L440B

**BATTERY Powered**

## HIGH TECH



- ⊕ Integrated microSD for data collection and analysis of machine functions
- ⊕ Easily adapt the machine to your mine conditions
- ⊕ Ready-to-use radio remote control
- In option* Autonomous operation
- In option* Person detection system for greater safety

## RELIABILITY



- PROVEN COMPONENTS
- UNDERGROUND USE
- ALTITUDE  $\geq 4000\text{m}$
- TEMPERATURE  $<35$  TO  $40^\circ$

- ⊕ Certified powertrain
- ⊕ Designed for tough underground applications

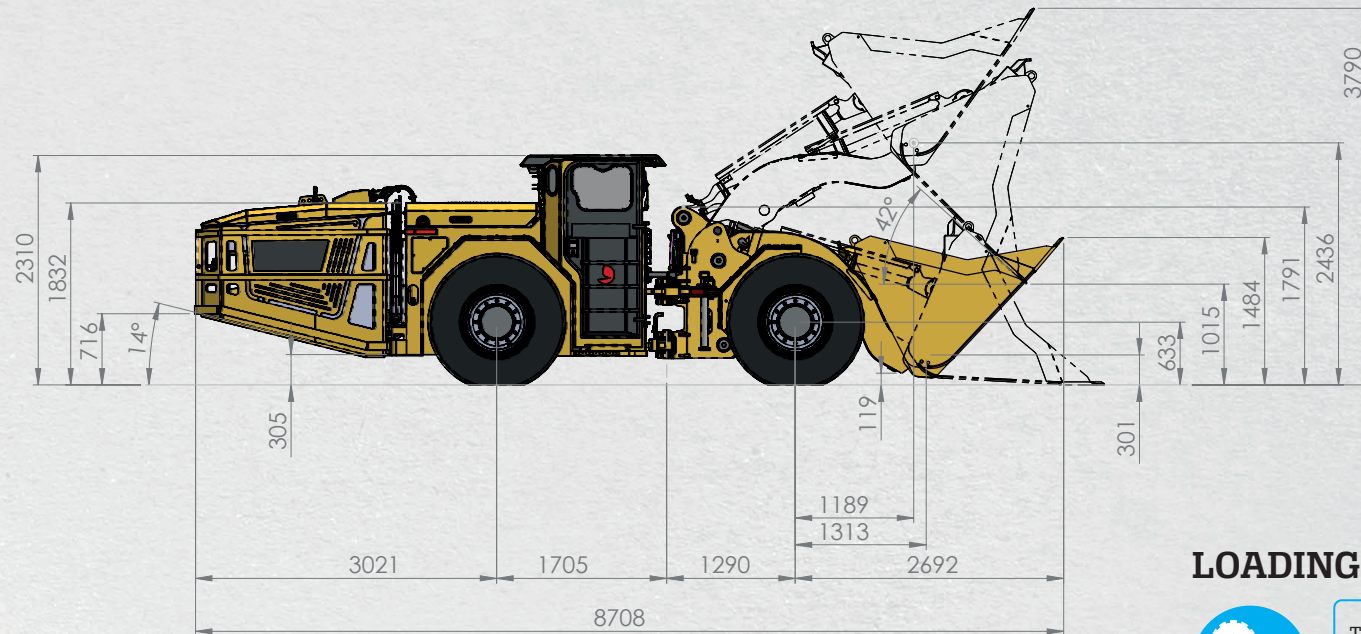
## COMFORT AND ENVIRONMENT



EMISSION  
**0% CO<sub>2</sub>**

LOW NOISE

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



## BATTERIES



224kWh  
LiFe P04

OPERATING  
AUTONOMY  
**4-5H**  
in constant use

- ⊕ Integrated charger for full flexibility
- ⊕ 4-hour charge at 400V on any 32A socket

## LOADING POWER



TRACTIVE EFFORT  
**12t**

MAXIMUM PRODUCTIVITY

BREAKOUT FORCE, HYDRAULIC LIFT  
**13T**

BREAKOUT FORCE, HYDRAULIC TILT  
**13,5T**

## SAFETY



MULTIDISC BRAKES  
SAHR\*

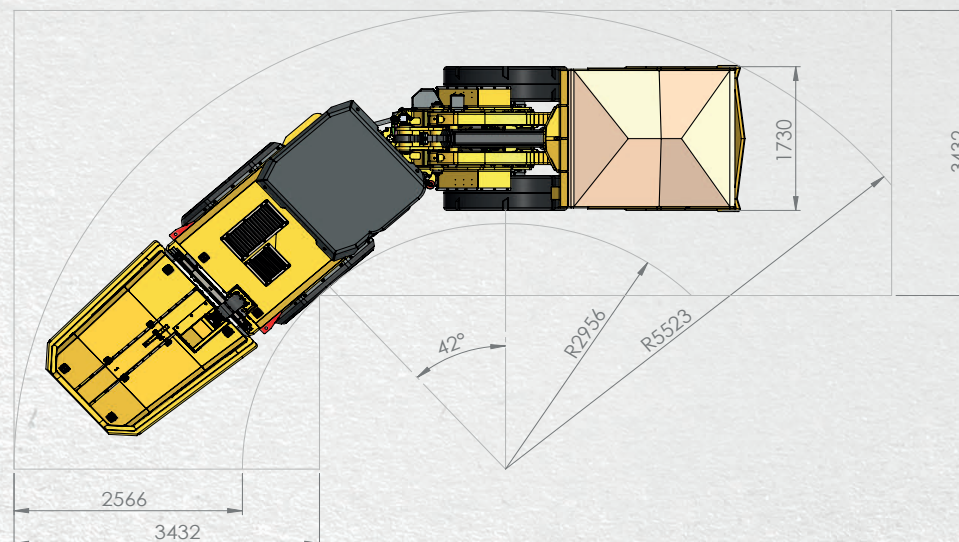
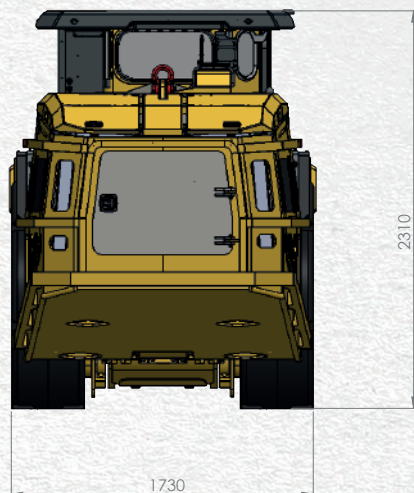
AUTOMATIC BRAKING

START UP CHECKING

LOW TEMPERATURE BATTERY

- ⊕ Automatic batteries shutdown in case of failure
- ⊕ Extremely stable machine in all conditions
- ⊕ Very safe operator compartments, with automatic deactivation of controls when the door is opened
- ⊕ Auto service & park brake test

\*Spring applied hydraulic release



# SPECIFICATIONS

CAPACITIES		
Tramming capacity	4 600 kg	
Static tipping Load	14 000 kg	
Breakout force, tilt (SAE)	13 500 kg	
Breakout force, lift (SAE)	13 000 kg	
Tractive Effort	12 000 kg	
Empty weight	19 200 kg	
Empty weight distribution	Front 4 300 kg / Rear 14 900 kg	
Loaded weight distribution	Front 11 400 kg / Rear 12 400 kg	
Standard bucket volume	2,4 m³	
Density (t/m3)	1,8	2,4
Volume (m3)*	2,7	2
Width (mm)	1730	1730
* Heaped SAE		
PRODUCTIVITY		
<div>5H* AVERAGE 7km/h</div>	<div>2 to 5 % GRADE UP LOADED</div>	<div>100m TRAMMING DISTANCE X2</div>
		<div>1 PASS LOADING</div>
<div>120T/hour</div>		
* 3 to 5 hours depending on operator & Application		
SPEED		
Vehicle Speed loaded	0 to 12 km/h	
Boom speed	Raising 6 s / Lowering 5 s	
Bucket speed	Roll back 7 s / Dumping 9 s	
TIRES		
Deep Lug radial tire for Mining application I4.00 R24 L5S		
Mounted on demountable rims		
TRANSMISSION		
The L440B 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 synchronous motor 140kW mounted on transfer box through belt type reducer. Auto battery recharge while decelerating & breaking cycle.		
MOTOR & ENERGY		
Electric Motor		
For tramming : 1 x Rexroth 140kW motor		
For hydraulic : 1 x Rexroth 90kW motor		
Liquid cooled motors fort stability in high temp environment.		
Batteries	224kWh LiFe P04 (540V)	
2 x pack 112kWh (1 200kg/pack) with integrated charger		
Recharge	4 hours with 360-530V (3P + PE)	
Replace battery packs	≈ 20min with Battery QRS	

HYDRAULIC SYSTEM	
Return & Suction filter	10μ with replacable element
Fluid	ISO VG32
Gear type pump powered by an electric motor	
Electronic Pilot Steering & Bucket Controls	
Hydraulic Cylinders, double acting type : one for lifting, one for tilting and one for steering	
ELECTRIC SYSTEM	
Sealed electrical system with replaceable harness	
2 batteries 12V 38Ah for wake up with self charge	
Accessories : 24V	
4 Front & 4 Rear LED lights	
7' Display for diagnostic & function	
OSCILLATION	
Rear axle mounted on oscillation frame with 12° articulation (6 degrees in each side)	
OPERATOR'S COMPARTMENT	
Rubber-mounted open cabin, located in the center of the rear frame for greater space and visibility	
ROPS/FOPS Certified bolted Cabin	
Side Seated Operator	
Seat with suspension, and safety belt	
Ergonomic built-in armrests ajustable with Joystick controls	
Ergonomic control panel with 7' display for Diagnostic & Functions	
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 and electric breaking while recharging the batteries	
Left foot pedal for emergency use only	
Safety 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.	
Manual actuation by operator and automatic actuation in case of hydraulic or electric energy loss.	
FRONT AND REAR AXLES	
Front & Rear axles, Kessler D81 Series	
Front: Rigid axle with wheel end planetary and limited slip differential	
Rear: Oscillating mounted axle with wheel end planetary and limited slip differential	
HYDRAULIC TANK	
Our Aramine's battery powered loader allows a removal of fuel and transmission tanks. Only the hydraulic tank is required	
Hydraulic tank	90 L (Welded to frame)

STANDARD EQUIPMENTS	
Certified ROPS/FOPS Cabin	
Ergonomic and comfortable operator's compartment for enjoyable operation	
Dash Board with 7' 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, 2 electric brakes	
LED type lights	
Direct Electric Drive Transmission	
Batteries Quick Replacement System	
1 x 224Kw Energy module with on-board charger	
LiFe PO4 battery, proven stability & reliability in toughest environments	
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	
Replaceable inserts to central hinge, bucket and boom articulations	
Dump Cylinder Protection	
OPTIONS	
Automatic lube system	
Extinguisher	
Fire Suppression system ANSUL, liquid or powder	
Radio Remote Control system	
Emergency Power Steering (electro-hydraulic)	
Bucket with high abrasive blades reinforcement	
EOD Ejector Blade Bucket	
Additional 224 Kw energy module	
Battery Replacement Bench	
Enclosed, pressurised and filtered cabin, soundproofing, air conditioning, heating, windscreen washer and wipers	
RECOMMENDED DRIFT SIZE	
(Cabin mounted)	

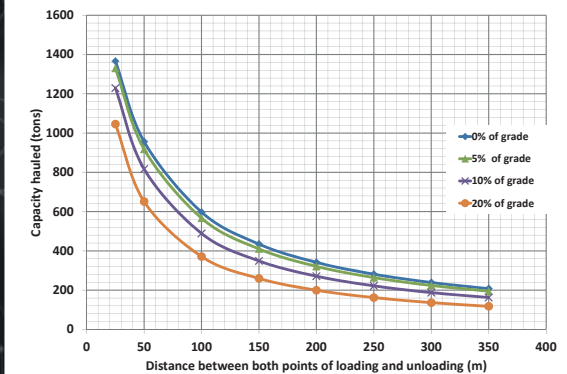


# PERFORMANCES

## BATTERY AUTONOMY & PRODUCTION IN T/h

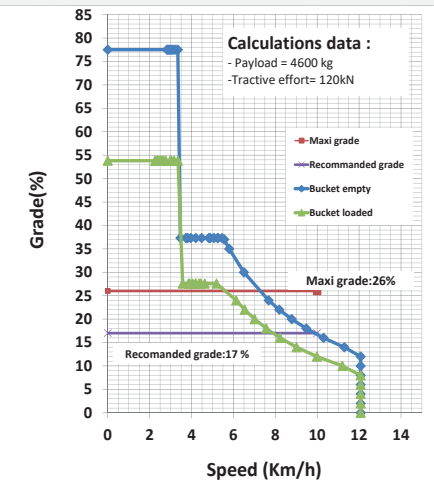
Capacity hauled

**BATTERY DISCHARGE : 100%** (Equivalent at 95% DOD\*)  
 Rolling resistance of tires : 3%  
 LOADED ON ON THE WAY UP and EMPTY ON THE WAY DOWN  
 The haulage Average speed : 7 km/h  
 \*Depth Of Discharge

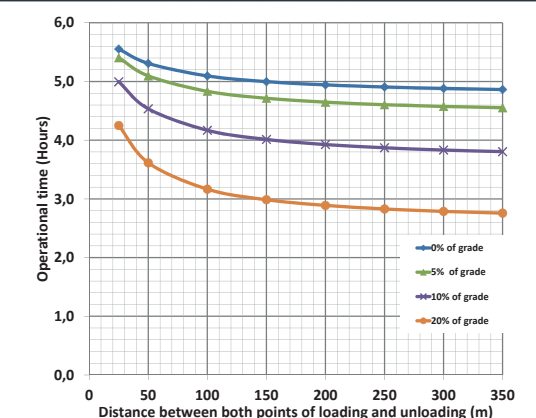


## SPEED ON GRADE

Performance curve



## OPERATIONAL TIME



# NEVER STOP MINING



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