

MINING LOADER L440B

BATTERY Powered

CAPACITY : 2.5m³ 4.5 t



SECURITY



POWER



COMFORT



AUTONOMY

A NEW STANDARD FOR
UNDERGROUND MINING

 **Aramine**
NEVER STOP MINING

MINING LOADER L440B

BATTERY Powered



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 m².

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 independant charging cooler and integrated charger. You can rely on your machine for continous operations.



QUICK
Replacement
system

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

COOLER
during
charging only

Comply
to EC
register



Designed
& made in



MINING LOADER L440B

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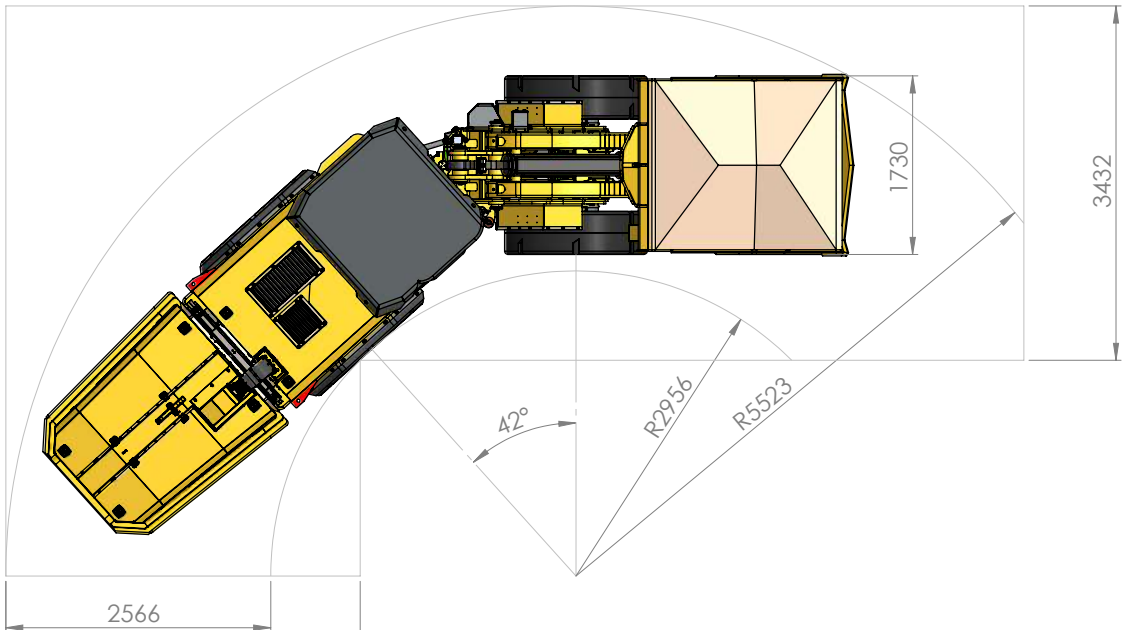
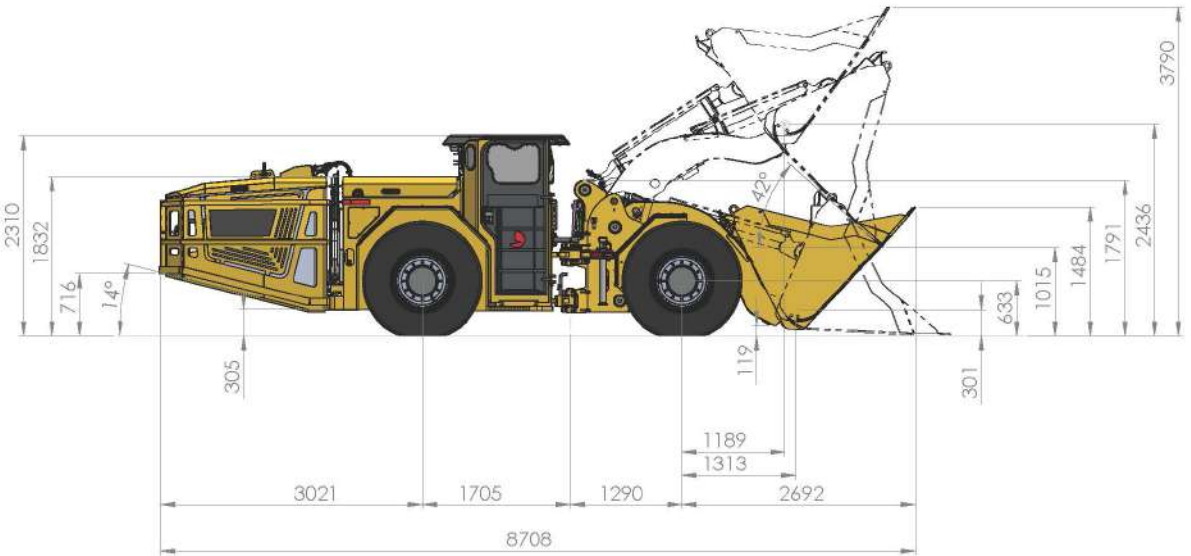
BATTERIES



224kWh
LiFe P04

OPERATING
AUTONOMY
4-5H
in constant use

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



RELIABILITY



PROVEN
COMPONENTS

UNDERGROUND
USE

ALTITUDE
≥4000m

TEMPERATURE
<35 TO 40°C

+ Certified powertrain

+ Designed for tough underground applications

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 compartment, with automatic deactivation of controls when the door is opened

+ Auto service & park brake test

*Spring applied hydraulic release

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

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

LOADING POWER

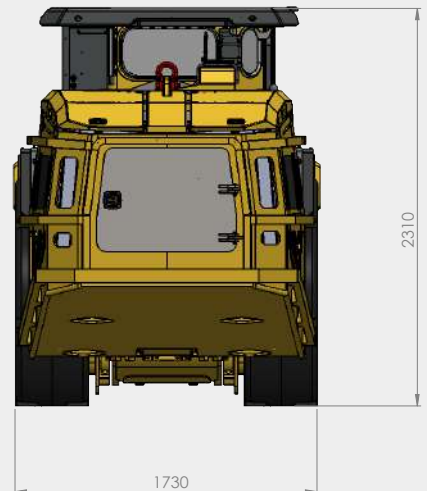


TRACTIVE
EFFORT
12 t

MAXIMUM
PRODUCTIVITY

BREAKOUT FORCE,
HYDRAULIC LIFT
13 t

BREAKOUT FORCE,
HYDRAULIC TILT
13.5 t



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 m ³	
Density (t/m ³)	1,8	2,4
Volume (m ³)*	2,7	2
Width (mm)	1730	1730

* Heaped SAE

PRODUCTIVITY

5H* AVERAGE 7km/h	2 to 5 % GRADE UP LOADED	100m TRAMMING DISTANCE X2	1 PASS LOADING
120T/hour			

* 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

Smooth radial tire for Mining application I4.00 R24 L5S

Mounted on demountable rims

TRANSMISSION

Mining loader with direct driveline.

Electric synchronous motor 140 kW (with permanent magnet) mounted on transfer box through belt type reducer.

Auto battery recharge while decelerating.

MOTOR & ENERGY

Electric Motor

For tramming : 1 x Rexroth 140kW motor

For hydraulic : 1 x Rexroth 90kW motor

Liquid cooled motors for stability in high temp environment.

Batteries 224kWh LiFe P04 (540V)

2 x pack 112kWh (1 200kg/pack) with integrated charger with liquid-cooled integrated charger. Battery module preheating system in extreme cold.

Recharge : 4 hours with 360-530V (3P + PE)

Replace battery packs ≈ 20min with Battery QRS

HYDRAULIC SYSTEM

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 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 adjustable 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

The loader is equipped with a single hydraulic tank (welded to frame)

Hydraulic tank : 90 L

SPECIFICATIONS

STANDARD EQUIPMENTS

- 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
- Electrical operated 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



PERFORMANCES

BATTERY AUTONOMY & PRODUCTION IN T/h

Capacity hauled

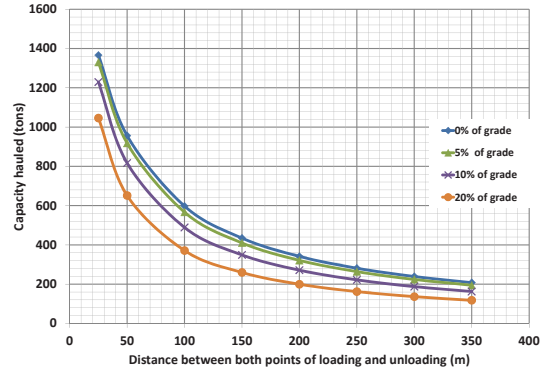
BATTERY DISCHARGE : 100% (Equivalent at 95% DOD*)

Rolling resistance of tires : 3%

LOADED ON ON THE WAY UP and EMPTY ON THE WAY DOWN

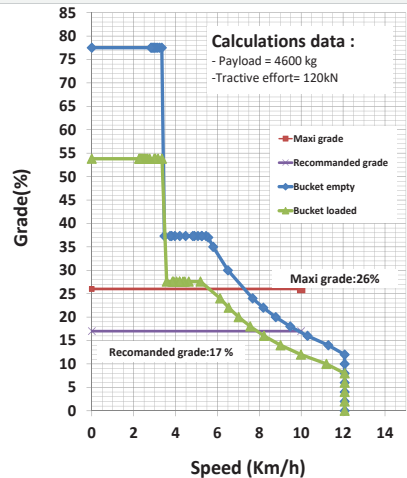
The haulage Average speed : 7 km/h

*Depth Of Discharge

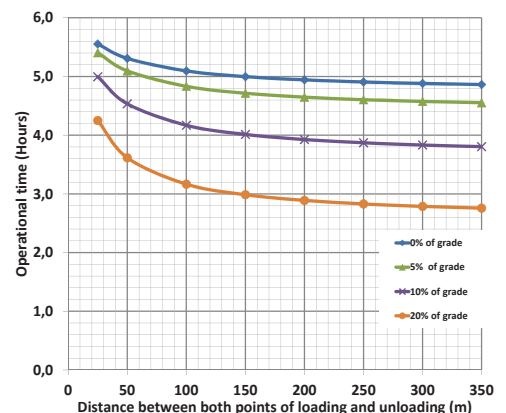


SPEED ON GRADE

Performance curve



OPERATIONAL TIME



NEVER STOP MINING



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