

RAILWAY INSPECTION VEHICLE

MINI 4-4



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1. GENERAL DESCRIPTION

1.1. General requirements

The **MINI 4-4** was designed to carry a group of up to four people. It operates in both directions and has a dual driver's station for this purpose. It requires only minimal periodic maintenance to reduce downtime and very low operating costs.

The **MINI 4-4** can be used to tow or push a **MINI 1T** trailer (optional) with a capacity of 1000 kg for the transport of materials and equipment.

1.2. Standard equipment

- Full two-way operation with duplicate pipe controls at each end.
- Digital speed and distance counter (kilometres or miles).
- A dedicated gearbox with **forward / neutral / reverse** positions that allows you to select the direction of travel with a simple lever operation.
- Automatic clutch.
- Complete control by lever.
- Automatic parking brake acting on all four wheels, foot operated.
- Hydraulic service disc brake acting on all four wheels, operated by lever.
- Removable control lever without tools for safety reasons.
- Design for low maintenance needs with minimal procedures.
- Cast aluminium wheels (not insulated - optionally insulated) mounted on steel axles over their entire length.
- All fasteners are sealed and maintenance-free.
- Four seats with lowered backrests, upholstered.
- Red / white LED position lights with automatic selection (mounted at the front and rear of the vehicle).
- Electrical control of the parking brake to prevent the operator from controlling the motor when the parking brake is applied.
- 12 V LED spotlight (automatic selection according to direction of travel).
- Alternator 12V 35 A.
- Horn.
- Two front and rear towing brackets including a quick electrical and hydraulic connection between vehicle and trailer for signalling and service braking.
- User manual and warning labels in French language.
- Dry powder extinguisher (1 litre capacity).
- Retractable side handling bars.

2. TECHNICAL SPECIFICATIONS

Track gauge (<i>others on request</i>) :	1,435 mm or 1,000 mm
Honda GX200 (four-stroke with manual start)	4.3 KW petrol engine at 3,600 rpm
Minimum bending radius	70 m
Max. slope	40‰
Max. overflow	180 mm
Loading gauge	Compliant with UIC505-1
Chassis	Tubular welded structure
Non-insulated cast aluminium wheel, mounted on axles (in steel)	4
Wheel diameter	383 mm
Seats, lowered backrests, upholstered	4
Speed from	0 to 20 km/h - continuously variable
Service brake	Hydraulic disc brake (acting on both axles, lever operated)
Automatic parking brake (dead man)	Electromagnetic disc brake (acting on both axles, equipped with return spring)
Traffic lights (color automatically selected according to the direction of traffic)	Red/High intensity white LED
High intensity LED headlights (automatic selection according to traffic direction)	2
Autonomy	~ 2 hours in continuous operation
Alternator	12V, 35A
Electric horn	12V DC ~ 100 Db(A)
Dimensions	
Length	~ 2,715 mm
Width	~ 1,650 mm
Height	~ 1,000 mm
Weight (base unit without any option)	~ 455 kg

3. OPTIONS

3.1. Projector ramp

This tilting ramp allows the track to be illuminated 360° all around the vehicle. This equipment is powered by the vehicle's electrical system.

It is composed of:

- 10 high intensity LED lamps, mounted on a tilting gantry;
- 4 LED lights placed under the chassis.



3.2. Off-track kit

This kit allows the **MINI 4-4** to be taken off track. It consists of two assemblies (one on each side of the vehicle). Each set consists of two braked and height-adjustable wheels for easy passage on the rail. This kit also works on the trailer.



3.3. Electric winch

3.3.1. Description

This electric winch is characterized by its maneuverability (manual electric control) and ease of installation. It is distinguished by its small size, its robustness and has numerous application possibilities. It has its own independent electrical box.



3.3.2. Technical characteristics

Cable length with hook.....	15 m
Electric motor.....	12V DC 0.89 kW
Pulling force	1,361 kg
Dimensions	
Length	440 mm
Width	380 mm
Height.....	260 mm
Weight	~ 15 kg

3.4. Insulated wheels

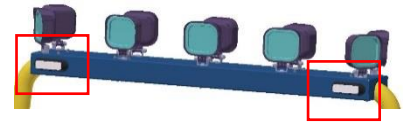
The **MINI 4-4** can be equipped with insulated aluminum wheels with a diameter of 383 mm.

3.5. Storage cover

This storage cover protects the MINI 4-4 from atmospheric changes when not in use.

3.6. Four blues LED penetration lights (specific for emergency use)

These lights are used exclusively for emergency interventions. They are placed on the projector ramp, two on each side (red box).



3.7. Drawer box from 1 to 4 units

These drawer boxes are used to store small items. They are placed under the seats.

Overall dimensions : L475 x P550 x H358

3.8. Trailer

3.8.1. Description

Trailer type **MINI 1T** is versatile, designed for specific use with the **MINI 4-4**.

This trailer is equipped with a hydraulic disc service brake acting on the front axle - controlled directly from the **MINI 4-4** service brake. It allows full-service braking of the trailer, operated from the MINI 4-4 lever, which is recommended in the case of frequent use of the trailer with heavy loads and/or steep slopes.



The MINI 1T trailer is equipped:

- An elongated tubular steel frame.
- Two electromagnetic parking brakes - Controlled by the MINI 4-4.
- A hydraulic service brake mounted on the front axle.
- An aluminium tray.
- Four anchor points.
- Two retractable handling handles.
- Red/white LED position lights.
- Orange/yellow reflector.
- Four mudguards.
- An articulated drawbar with spindle.

3.8.2. Technical characteristics

Track gauge (<i>other on request</i>)	1,435 mm or 1,000 mm
Loading gauge	Compliant with UIC505-1
Non-insulated cast aluminium wheel, mounted on axles (in steel)	4
Wheel diameter	383 mm
Towing speed	Up to 20 km/h
Maximum transportable load	1,000 kg
Maximum spillage	180 mm
Automatic parking brake	Electromagnetic disc brake
(controlled by the MINI 4-4).....	(acting on the front and rear axle, equipped with a return spring)
Height of the removable sides	200 mm
Dimensions	
Length	~ 2,700 mm
Width	~ 1,650 mm
Height.....	~ 500 (without drop sides)
Dimensions of the tray:	
Length	~ 2 100 mm
Width	~ 1,500 mm
Weight	~ 200 kg

3.8.3. Trailer options

- Insulated aluminum wheels with a diameter of 383 mm.
- Drawer box from 1 to 4 units.

Revision	Date	Author	Validation	Revision of description
1	08/04/2019	A.VONTHRON	S.FRANCOIS	<i>Initial Document</i>
2	12/02/2020	A.VONTHRON	S.FRANCOIS	<i>Modifications Technical characteristics</i>

The technical specification of the equipment of the present offer strictly conforms to the Commercial/Financial quotation. The technical characteristics, including the conformity to the standards mentioned, the components, dimensions and access diagrams would have, prior to starting of execution and manufacturing of the equipment, to be approved by the customer as "conforming to the particular specification and various track loading gauge(s)" of the network(s) on which the equipment to be delivered is to be operated.

All modifications and/or eventual technical alteration arising after the date of the offer could result to a review of the commercial offer.

We reserve the right to modify any equipment specification of the present offer to take into account the latest technical improvements and working conditions at the date of manufacturing.

In case of any discrepancy between our offer and the attached documentation, the technical specification of our offer should be taken into consideration. Photographs may include options.

Masses and dimensions may vary \pm 5%.