

OPERATIONS ON BALLAST, SLEEPERS AND TRACK

ROTARY BRUSH FOR RAIL CLEANING

MODEL **BRV**



1. DESCRIPTION AND OPERATION

A. Track brush attachment:

The track brush attachment for rail-road loader removes excess ballast from the track by means of a rotating brush and a conveyor belt to evacuate the ballast shoulders (left or right).

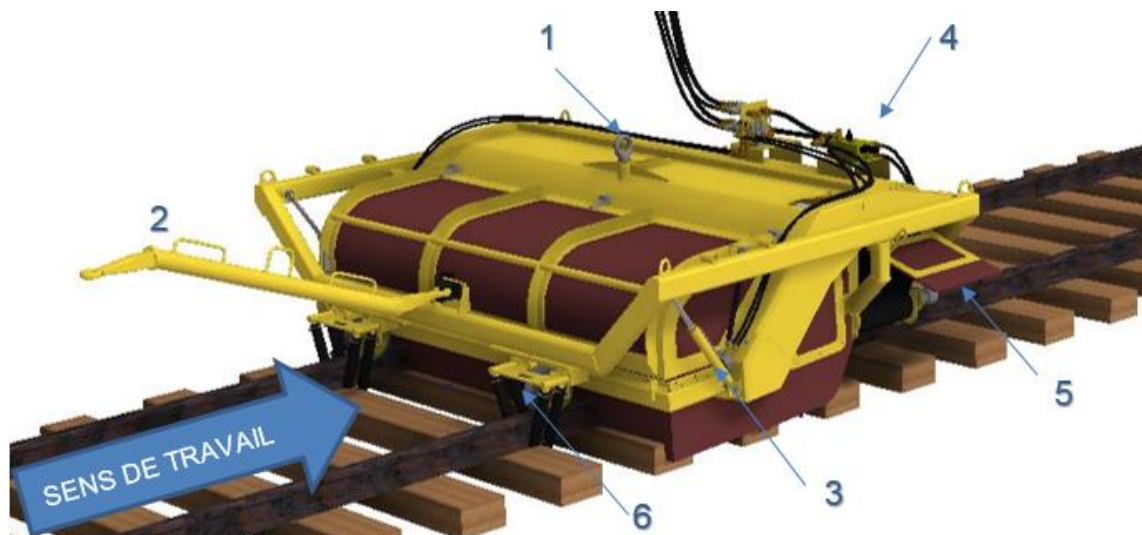
The BRV shall be attached at the end of the excavator's boom (KGT or other) with a hook (1) or slings and is pushed by the loader via a 2.2 m long tie rod (2).

The standard version of the BRV was designed for track gauge of 1,435 mm and remains within the top part of the UIC505-1 transit gauge.

When passing a level crossing or any other turnout/switch, the excavator should lift the BRV to prevent damages to the rubber hoses of the brush.

1. DESCRIPTION AND OPERATION (Cont'd)

A. Track brush attachment (cont'd):



The rotating brush and the conveyor belt are driven by hydraulic engines.

The adjustment of the cleaning depth (cylinders 3) is directly done by the controls of the hydraulic rail-road loader.

Inverting of ballast ejection direction (left or right) is done by a manual inverter on the hydraulic distributor (4).

Two hatches are located on both sides of the brush to guide the ballast exit (5)

The two rail brushes (6) remove ballast from the foot of rail and from the rail fastenings.



Two hand-operated screw-brakes (7) ensure that the BRV remains in position during ON/OFF-tracking or when it is stationed alone on track. Two pilots (8) are located in front of the front wheels to brush the top of the rail.

An easy access to the brush is provided via a cover in order to carry out brush maintenance operations.

The rotating brush is made of rubber hoses of diameter 55 mm.

1. DESCRIPTION AND OPERATION (Cont'd)

A. Track brush attachment (cont'd):



The BRV has been designed for a standard 1,435 mm track.

It can be adapted, upon request and subject to verification of gauge profile, to all tracks from 950 mm to 1,676 mm. Please contact us.

B. Tie rod coupling:

The tie rod, of 2.2 m length, is supplied for a "Rockinger Ø40 mm" coupling positioned 1.1 m to 1.3 m above the rail.

For any other rail-road loader coupling, please contact us.

C. Hydraulic supply:

Four connections are used to hydraulically connect the BRV to the excavator or rail-road loader:

- **1x Supply (P):** continuous oil flow of 120 L/min and 180 bar pressure, swivel hose fitting M42 x 2, cone 24° compliant with DIN3865;
- **1x main return line (T):** continuous oil flow of 120 L/min, swivel hose fitting M42 x 2, cone 24° compliant with DIN3865;
- **2x distribution (A and B):** continuous oil flow of 30 L/min and 150 bar pressure, swivel hose fitting, cone 24° compliant with DIN3865.

Hydraulic couplings are supplied. However if the rail road loader of the customer is not from the Geismar range of product then drawings and information related to this rail road loader shall be **mandatory** be supplied at time of ordering.

2. TECHNICAL DATA

- Width of brushing: ≈ 2 530 mm
- Track gauge: 1 435 mm (*others on request*)
- Working speed: from 0.5 to 1 kph
- Thickness swept per run: from 6 to 8 mm
- Rotation speed of the rotating brush: ≈ 260 rpm
- Maximum stroke of brush dive: ≈ 250 mm
- Hydraulics:
 - Rated hydraulic pressure (*P + T engines*): 180 bar
 - Effective hydraulic oil flow (*P + T engines*): 120 L/min
 - Rated hydraulic pressure (*A + B cylinders*): 150 bar
 - Effective hydraulic oil flow (*A + B cylinders*): 30 L/min
- Dimensions:
 - Length: ≈ 2 500 mm
 - Width: ≈ 3 210 mm
 - Height: ≈ 1 300 mm
- Mass: ≈ 2 700 kg

3. ACCESSORIES AND OPTIONS (at extra price)

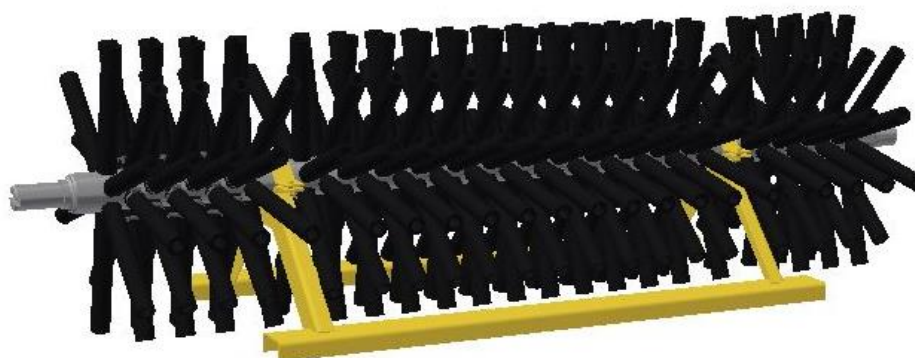
- **Brush axis**

In order to reduce the down-time of the BRV, an additional brush-axis can be supplied, fully equipped with rubber hoses.

The whole brush replacement limits the duration of this intervention to 2 hours.

The support makes it possible to bring the brush axis at the right height for an easy mounting.

Replacing used hoses can be done in the workshop, in optimal work conditions



3. ACCESSORIES AND OPTIONS (at extra price – Cont'd)

- Brush hoses**

The machine is initially fitted with classical hollow brush hoses D55.



Thick-walled hoses can be proposed as well, whose life time is twice longer.



- Movable power pack model GEM 55**

BRV can be powered by a mobile and autonomous power unit model GEM 55 (1).

In this case, BRV + GEM 55 will be pulled by the loader, releasing arm of the loader.

All movements of the brush are controlled by the radio remote control of the group.

BRV will be connected hydraulically to its group and a lifting beam (2) will allow the simultaneous lifting of the assembly.



Technical data:

- Sweeping path: $\approx 2\,530$ mm
- Track gauge: $1\,435$ mm (*others on request*)
- Power pack: 55 kW
- Hydraulic connections:
 - Brush rotation + belt (P + T): 120 L/min at 180 bar maximum
 - Hydraulic nominal pressure (A + B cylinders): 80 L/min at 160 bar maximum
 - Drain: 30 L/min at 2 bar maximum
 - Brake: 10 L/min at 30 bar minimum
- Dimensions:
 - Length: $\approx 1\,850$ mm
 - Width: $\approx 2\,800$ mm
 - Height: $\approx 1\,950$ mm
- Mass: $\approx 2\,000$ kg

4. COMPATIBILITY OF USE

Attachment compatible with rail/road loader:

	KGT-V	KGT Tronic	KGT-4RS	KGT-E	KGT-P	Other loader
Compatibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Conditions	N/A	N/A	N/A	N/A	N/A	Subject to feasibility

Attachment compatible with jib(s):

	Lifting	Excavation	Universal	Extension 3 pieces	I-Frontal
Compatibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conditions	N/A	N/A	N/A	N/A	N/A

Attachment compatible with following connection(s):

	On the end of jib	Lifting hook	Rotator	Rototilt	Quick hitch model S60
Compatibility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conditions	N/A	N/A	N/A	N/A	N/A

*In the case of client would mount a Geismar attachment on competitors' loaders, please contact us to know compatibilities
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.
Pictures and drawings may include some options and are not contractual.*