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KLK
electromateriales

BRAKING RESISTORS



RAILTECH
WELDING & EQUIPMENT
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Braking Resistors are used to transform kinetic energy of the vehicle into heat by means of electric braking.

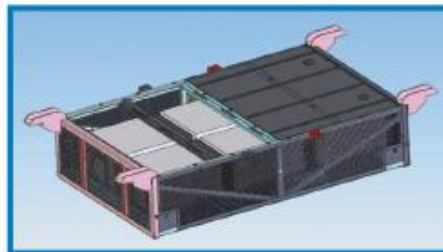
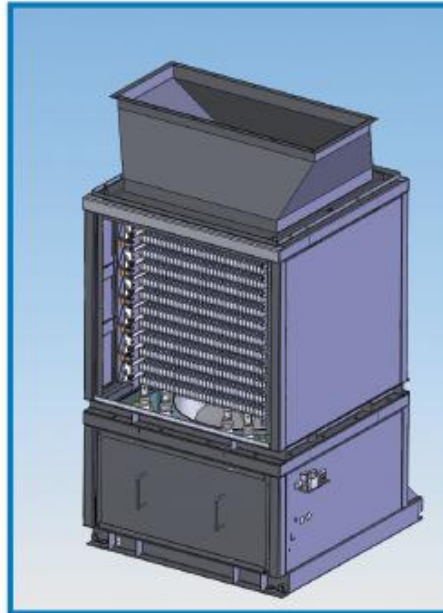
Braking Resistors are usually installed:

- On the roof of a vehicle, where hot exhaust air is released upward.
- Under frame, where the hot air released is exhausted sideways when the vehicle is in motion or using a blower.
- Inside the vehicle, where the resistors are usually forced-air cooled, where fresh air is taken from the bottom of the vehicle and hot air is expelled from the top.

The interchange of heat between the resistor element and the surrounding air can be increased by the flow of air at ambient temperature, this flow of air will increase the displacement of hot air and will achieve in short time a bigger volume of cold air in contact with the resistor elements and therefore a higher heat-exchange.

This technique together with installation of resistors in adequate chosen compartments will allow that traction type resistors will work at higher temperatures than the standardis type. Working temperature of selected resistive materials will be above 1000 Jc.

Resistor elements are assembled in banks by means of strong rods and ceramic spacers. Segments of resistor banks are mounted in a strong support frame of stainless steel.



Stainless steel is also used for bolts, nuts and washers. The resistors are designed to avoid disturbing noises caused by pulsating current.

Resistors mounted in motor-powered vehicles are exposed to sine waves vibrations of variable amplitude and frequency.

Resistors are designed by our engineers with a sophisticated 3D model in order to find the best solution for our Customers and to withstand shocks and vibrations that normally occur in operation. Design and production, strictly follows our ISO 9001:2008 quality standards as well as the most severe international specifications.

A Railway Resistor is a 100% custom made product, where a few constructive and technological principles are applied in a project-specific mechanical frame layout.

