

W1RB MINING BODY


COMPLEX
TRANSPORT SOLUTION



KEY BENEFITS



EFFICIENCY

A close-up photograph of a red industrial machine component, likely a tipper body. A blue shaft is visible, extending from the top left towards the center. A yellow label with the word "POWER" and some icons is attached to the red surface. The machine has a textured, metallic appearance.

The equipment operating in extreme conditions in open pit mines must be robust. Failure-free operation and the longest possible operating period are necessary to ensure the productivity of technological processes and appropriate implementation time. The tipper with W1RB body will cope with even the most demanding tasks. It was designed to transport the output from the extraction site to the crusher as efficiently as possible. 24 hours a day, 7 days a week, 365 days a year.

EFFICIENCY



LONG SERVICE PERIOD

The large fraction materials expose the tipper body to rapid wear. An innovative design using the properties of HARDOX 500 TUF steel produced by the Swedish steelworks SSAB and a 4-times smaller number of welds guarantee exceptional wear resistance, hardness and impact strength as well as ensure a maximum long service life.

SSAB



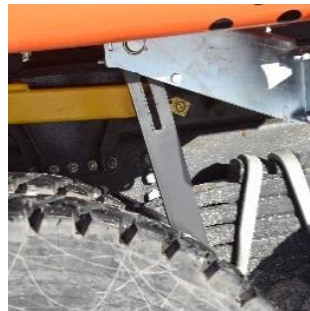
GREATER LOAD CAPACITY

The greater the load capacity of the tipper truck, the greater its efficiency. The low empty weight of the body allows you to reduce operating costs, including fuel consumption, and increases productivity. The body with a volume of 21-25 m³ allows to transport 35-40 tons of excavated material.



SHORT UNLOADING TIME

The HYVA hydraulic cylinder allows to lift and lower the body within the optimal 30-35 s. With repeated cycles, this allows the saved time to be used for a larger number of cycles, and thus to transport more load. The hydraulic system is complemented by the HYVA SMART system which monitors each tipping cycle, supporting the driver in making better decisions, improving safety and efficiency before and during tipping operations. Thanks to the ability to analyze data in the cloud, it is a source of information based on which one can optimize load management, shorten unplanned breakdowns and create preventive maintenance schedules.



TIRE PROTECTION

The ability to overcome difficult-to-reach places is a huge advantage of mining vehicles. However, due to debris and rocks falling from the body, the tipper tires are subject to constant wear despite their best selected parameters. Stone blades mounted between the twin wheels on the rear axles are intended to prevent their possible wedging between the tires. This extends the life of tires and reduces costly repairs.

SAFETY

Safety is important in everything we do. This also applies to a workplace such as an open-pit mine. Due to the tragic consequences of possible accidents, it is crucial to ensure the necessary level of health and safety at work and to minimize the accident rate in the mining process.

KH-KIPPER has over 27 years of experience in providing comprehensive transport solutions to over 70 countries around the world, including mines. Long-term relationships with customers, chassis manufacturers and suppliers in many markets and the information collected allow us to provide the safest possible products.

SAFETY



CABIN PROTECTION

The roof over the cabin, which is an extension of the front wall of the body, is up to 3 m wide, thanks to which it effectively protects the cabin against impacts of rock material during loading, but also when driving down a steep slope, when the load at the very top may slide towards the cabin. If damaged, it can be dismantled and replaced.



SUPERVISION SYSTEM

One of the functions of the HYVA SMART system is the ability to view the position of the vehicle in relation to the ground, which allows you to operate the tipper in such a way that you can empty the body without risking the truck tipping over. The system stores the limit values for the longitudinal and lateral inclination of the chassis and if they are exceeded, it will prevent the body from tipping. If the vehicle tilts too much, the unloading process will be stopped. The device also allows you to determine the weight of the load and remembers it, creating statistics on the vehicle's operating efficiency. A separate tab reminds the driver about body maintenance activities.



STABLE DRIVING WITH LOAD

The relatively low center of gravity with optimal material distribution stabilizes the vehicle when driving with load, especially when cornering.



HANDLING THE BLIND SPOTS


A huge convenience when driving, considering the size of the tipper truck and its huge roof, is a camera placed in the rear part under the body, which shows the view from the rear. This also increases the driver's safety and helps when driving up to the crusher's hopper. AI cameras are the next generation of active blind spot detection. Using artificial intelligence, the cameras detect and recognize a human figure in a defined area and warn the driver visually and/or acoustically of a possible collision. Image processing is built into the camera which means no other hardware is required.



FLOOR HEATING SYSTEM

Technological transport of minerals takes place all year round regardless of the weather. The heating system uses exhaust gases to prevent adhesive materials from sticking to the inside of the body. This does not allow the load to freeze and thus increases safety during unloading.

WORKING COMFORT



Working comfort affects not only safety, but also efficiency. The WIRB tipping body meets even the most demanding production needs and was designed specifically for the conditions found in open-pit mines. This is high-performance equipment that allows efficient loading with a bucket of any volume, safe unloading in difficult and muddy terrain, as well as trouble-free movement in confined spaces, including tight corners of technological roads.

WORKING COMFORT



CONVENIENT LOADING WITH A LOADER AND EXCAVATOR

Not every mine has loaders or excavators with a bucket that lifts high enough. The KH-KIPPER body is set lower, and therefore the upper edge of the side walls is lower, which facilitates loading and reduces the risk of impacts on the sides. The body also has a more symmetrical shape compared to an articulated hauler, and its width of 3 m at the top makes it easier to load with a larger bucket.



EASY UNLOADING

The body is closed with the tailgate which is raised to allow large rock fragments to fall out. The rear wall opens automatically during tipping thanks to the use of an external rope system. The tailgate opening mechanism starts working when the body starts to lift.




The excavated material is transported all year round, also in winter. The adhesive material tends to settle in the corners of the body when unloading - especially at the front. To reduce this, the front wall is slightly inclined so that the load slides easily along it.



PRECISE UNLOADING

The raised floor at the rear protects the material from falling out when driving on sloping terrain. The body narrows down to 2.5 m, making it less likely to collide with the crusher. This enables precise material unloading. At the same time, fine aggregate is not spilled while driving which improves the durability of the tires

CO2 REDUCTION

The background of the text is a close-up photograph of the interior of an orange tipper truck body. The image shows the curved metal walls and floor of the body, with a bright light source creating a strong reflection on the surface. The overall color palette is dominated by the bright orange of the truck's body.

Our future depends on common care for nature. Minimizing the negative impact on the environment is one of the most important tasks of modern raw material mining.

Thanks to the use of high-quality materials for the production of the body and its durable construction, the tipper remains in operation longer, which translates into a lower impact on the natural environment than purchasing new equipment. A lighter body transports more load, saves fuel and increases productivity. Once the chassis is out of use, the body itself may be suitable for reuse on a new chassis.

Thanks to its lightweight body, the tipper transports a larger amount of load which leads to a reduction in fuel consumption, which is a non-renewable energy source. An efficient transport system is the basis for sustainable development.

The heat of exhaust gases is used to heat the floor and walls of the body in order to prevent the material from freezing inside.

TIPPER VS HAULER

1 LOWER COSTS OF PURCHASE AND PREPARATION OF INFRASTRUCTURE

Some open-pit mines are located in very limited areas, where technological roads are narrow and vehicles must be selected for maneuverability. A truck chassis-based tipper is narrower than a hauler and maneuvers better than a hauler, so it can achieve a higher operating speed to compensate for its slightly lower payload. The cost of purchasing several tippers, even with reinforced chassis, and smaller loaders, is significantly lower compared to a hauler and a large loader corresponding to its class. Road tippers are relatively small in size. Since the width of tipper trucks is smaller than that of classic haulers, they do not need such wide technological roads. This is a significant reserve for reducing operating costs, after all, when organizing such roads in deep mines, it is necessary to remove a huge amount of rock.

2 LOWER FUEL CONSUMPTION

The advantage of a tipper on a truck chassis over an articulated hauler is lower operating costs related to fuel consumption, tire replacement, spare parts, inspections and repairs. Fuel consumption is 40-50% lower compared to a hauler, which translates into a reduction in CO2 emissions, taking into account the fact that transport in the mine takes place 24 hours a day. The developed service network of most chassis manufacturers and the availability of spare parts in warehouses also reduce downtime. The vehicle renovation time is also shorter compared to a hauler.

3 GREATER MOBILITY

In the event of a breakdown of a tipper on a truck chassis, a mobile service station can come to the site, and if it is not possible to repair it on the mine premises, the vehicle can be transported on a public road to the nearest service station on a regular trailer. After finishing work in one mine, it can be transported in the same way to a new workplace, even to the other end of the country. Whereas, a large hauler must first be disassembled into parts, transported to a railway road, and then transported by train to a new workplace, where it must be reassembled.

4 TAILORED TO YOUR NEEDS

The bodies are designed in our design office, which means that we will help you select the product and its specifications. They are constructed for specific working conditions in a given mine, the challenges you encounter on a daily basis, the chassis, materials and equipment used. The specification of the body is configured together with the chassis manufacturer so that you receive a finished product tailored to your needs. The new aerodynamic shape of the body is thoroughly adapted to the chassis. This ensures not only appropriate functionality and volume, important for carrying out transport tasks in the mine, but also safety for road users. KH-KIPPER is accredited by the largest chassis manufacturers, being part of the ordering system and reporting on the company's condition. Thanks to the efficient configuration and ordering process, the delivery time of the complete truck to the client is shortened.



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