



CLEVER. EFFICIENT. CREATIVE.



**WÖLFLE**

# AN UNSTOPPABLE PASSION FOR TECHNOLOGY

---

**Clever, efficient, creative** — Finding the optimum solution is our job! As a leading supplier of technology wherever vehicles and machines are in operation, we work on and off the highway!

With more than 40 years of experience in development and production, we are your source for custom technological solutions perfectly tailored to your needs. Not only do we take care of the planning, we also manufacture individual components for you — in batches if requested. We work together with you to find a solution specially for you.

**Wölfe inside** — As a strong partner with great power, creativity and responsibility, we develop and produce seamlessly integrable components. Use our components in your vehicles and machines for peak performance! First rate solutions inside. Wölfe inside!

# 01 LOCATIONS

---

**01** **Wölfe GmbH headquarters**  
88416 Ochsenhausen, Germany

**02** **Wölfe Industrie- und Kraftfahrzeugteile Vertriebs GmbH**  
88416 Ochsenhausen, Germany

**03** **Wölfe s.r.o. plant**  
34174 Zavlekov, Czech Republic

**04** **Wölfe Sàrl plant**  
93005 Tétouan, Morocco



## 02 PRODUCTS

---



### CABS

- / Complete cabs
- / Operator platforms
- / Steering columns
- / Cladding components
- / Accessories



### ELECTRICS

- / Cable assembly
- / Central electrics
- / Control and operating consoles



### HV/AC

- / Heating and air conditioning systems
- / Electric heating
- / Control/Regulation
- / Dust filter systems
- / Protection ventilation



### ELECTRONICS

- / Power electronics
- / Software
- / Bus systems
- / Safety engineering
- / Control units
- / Operating panels
- / Displays

## 03 SECTORS

---

- / Agriculture
- / Automotive
- / Construction machines
- / Fire-fighting

- / Bus
- / Logistics
- / Mining
- / Mobile cranes

- / Rail transport
- / Special vehicles
- / Road construction
- / Defence technology





**AGRICULTURE**

## 04 AGRICULTURE

# ROBUST SYSTEM SOLUTIONS WITH HIGH AVAILABILITY INSIDE

*WÖLFLE INSIDE!*

---

**Rough terrain, 24/7 operation** — In farming, availability is everything. Harvesting etc. is linked to specific seasons. At these times, agricultural vehicles are in day and night use off road, and are exposed to a wide variety of environmental factors. Component availability is essential to ensure that, after extended downtimes, agricultural machines can quickly and reliably get up to speed and become fully operational again. Wölfle delivers the best technology, perfectly suited to the task of handling peak loads!



### 01 CAN-OPERATING PANEL

With its compact and robust construction, this operating panel is exactly the right component for use in the agricultural sector. Its most impressive feature is its resistance to herbicides, pesticides, organic oils and fuels.



### 02 CABLE SET

Reliable cable solutions are essential for trouble-free control and efficient, breakdown-free operation of agricultural vehicles. This unenclosed cable set can withstand extreme outdoor conditions. Our materials and technology are resistant to attack from a wide range of chemicals.



### 03 CAB

A comfortable workspace is a necessity for long, demanding operations. With its large field of vision, this cab allows a perfect overview of the site. The interior fittings are ergonomic and intuitive, making long working days in the fields considerably more pleasant.



01



CAN-OPERATING PANEL



02



CABLE SET



03



CAB





**AUTOMOTIVE**



01

STATIONARY AIR CONDITIONING  
OPERATING PANEL



02

CLIMATE CONTROL UNIT



03

AUTOMOTIVE CONTROL UNIT



**CLEVER. EFFICIENT. CREATIVE**

# FLEXIBLE AND CREATIVE SPECIAL SOLUTIONS INSIDE

*WÖLFLE INSIDE!*

**Long journeys and a wide range of weather and road conditions** — Anyone who drives a lot needs full concentration at all times. Our technology ensures a comfortable environment for drivers and passengers. In automotive component manufacturing, what counts is high-quality just-in-time solutions at an attractive price. Catering to such a wide range of industries, Wölflle is the right partner for creative solutions in the automotive sector. In addition to standard parts, we create special solutions to suit customers' requests for specific vehicle fittings. Our long-range vision makes us a source of innovative ideas in this sector!

## 01 STATIONARY AIR CONDITIONING OPERATING PANEL

Use Wölflle components for higher efficiency and improved air conditioning performance with lower energy consumption. The operating system with integrated temperature control for electric stationary air conditioning communicates directly with the compressor via a LIN bus.

## 02 CLIMATE CONTROL UNIT

This system enables an existing manual system to be upgraded for enhanced comfort with automatic temperature and stratification control. Its functions are based on proven models for automatic vehicle climate control systems.

## 03 AUTOMOTIVE CONTROL UNIT

Vehicles can be exposed to heavy vibration and impacts. Wölflle's built-in electronics are designed to withstand these loads.





**CONSTRUCTION MACHINES**

# 06 CONSTRUCTION MACHINES

## ROBUST TECHNOLOGY SOLUTIONS INSIDE

*WÖLFLE INSIDE!*

---

**Gravel, dust and wide variations in land height** — Construction machines are used for earthmoving on uneven, hilly terrain. Here these vehicles and their drivers have to contend not only with stirred-up dirt, but also extremes of heat and cold as well as all types of precipitation. In addition, the large number of workers and machines deployed often prevents a good overview of construction sites. This means that a high level of care and control is required. Whatever situation a construction machine has to cope with, Wölfle components ensure precise control and complete operational readiness at all times!



### 01 HEATING AND AIR CONDITIONING UNIT

This fully automatic heating and air conditioning system with temperature and air stratification compensates for factors such as intense sun or heat loss. Unlike standard systems, our climate model for HVAC systems gives the indoor temperature probe significantly improved measuring accuracy. This technology has won an award for innovation.



### 02 TFT DISPLAY UNIT

This standard technology from the entertainment industry sets a new bar for price and range of functions. This is made possible through the use of Windows Embedded Systems and associated functionality.



### 03 OPERATING PANEL

This panel provides next-generation function control. Its safety performance complies with level d (PL d) as specified in EN 13849-1.



01



HEATING AND AIR CONDITIONING UNIT



02



TFT DISPLAY UNIT



03



OPERATING PANEL





**FIRE-FIGHTING**



01

CREW CAB



02

OPERATING SYSTEM



03

PORTABLE FIRE PUMP  
OPERATING PANEL



**CLEVER. EFFICIENT. CREATIVE**

# INTUITIVE AND EASY TO OPERATE UNDER PRESSURE INSIDE

*WÖLFLE INSIDE!*

**Fire, smoke and sheer adrenalin** — Fire-fighters push themselves to the limit every day to save lives and protect buildings and facilities. During hectic, mentally and physically demanding activity, the whole crew must be able to rely on their service vehicles at all times. Wölfle components perform exactly as intended when an operation depends on them and every minute counts.

## 01 CREW CAB

The perfect refuge after a difficult operation. With its impressive modularity and adaptability, this cab can be integrated into a wide range of vehicles. The cab is produced to the customer's specifications and with the right product mix for completion by the vehicle manufacturer.

## 02 OPERATING SYSTEM

Operating systems for fire-fighting applications are designed for extreme service conditions. Intuitive and simple to use, they are designed for safe and reliable operation while wearing protective gloves. The PRM1050 and 550 operating systems have the flexibility to allow individualised selection of functions. At the same time, they have the surface feel, quality and reliability of batch-produced items.

## 03 PORTABLE FIRE PUMP OPERATING PANEL

Even under extreme conditions, the controls remain reliable and easy to operate. Wölfle has the expertise to adapt automotive components and their engine control units to an operating system.





**BUS**

# 08 BUS

## COMFORTABLE AND EFFICIENT CLIMATE CONTROL INSIDE

*WÖLFLE INSIDE!*

---

**Extremely high air exchange rates, sudden moisture, frost** — A bus driver needs a clear view of the road under a wide range of conditions. Drivers of public transport buses need vehicles that they can completely rely on. They are responsible for their passengers. Keeping passengers safe and ensuring that services run as normal are the number one priorities. Wölfle's component technology ensures maximum comfort and safety for passengers and drivers.



### 01 BATTERY COOLING SYSTEM

To ensure long lifespans, lithium polymer cells must be kept at a uniform temperature, constant to  $<1^{\circ}\text{K}$ . Battery cooling systems with integrated thermal management can achieve this with minimal additional use of energy.



### 02 CLIMATE CONTROL PANEL

Perfectly suited to the new energy systems in hybrid drive designs, these components operate without high-loss voltage conversion. This significantly increases their efficiency.



### 03 FRONTBOX

The stainless steel frontbox is highly corrosion-resistant. Specifically tailored to the customer's requirements, the build-in system fits the available space perfectly.



01



**BATTERY COOLING SYSTEM**

02



**CLIMATE CONTROL PANEL**

03



**FRONTBOX**





**LOGISTICS**



 01

HEATING AND AIR CONDITIONING UNIT



 02

ELECTRIC HEATING



 03

CONTROL UNIT



**CLEVER. EFFICIENT. CREATIVE**

# COMPACT COMPONENTS FOR BEST PERFORMANCE INSIDE

*WÖLFLE INSIDE!*

**Chilled storerooms, limited space, tight deadlines** — Anyone who works in logistics is familiar with these difficult conditions and used to operating in tight, multiply branching warehouse aisles. All components used in forklift trucks and other logistics vehicles operating in such places must be very compact and yet also offer extremely high performance. At the same time, these vehicles need to be easy to control so that goods can get safely from A to B, even under hectic working conditions. High performance in tight spaces is our speciality!

## 01 HEATING AND AIR CONDITIONING UNIT

Our climate model allows exceptionally good vehicle interior temperature control. Our components allow drivers to work comfortably at a constant temperature in locations where ambient temperatures can vary by up to 30°K.

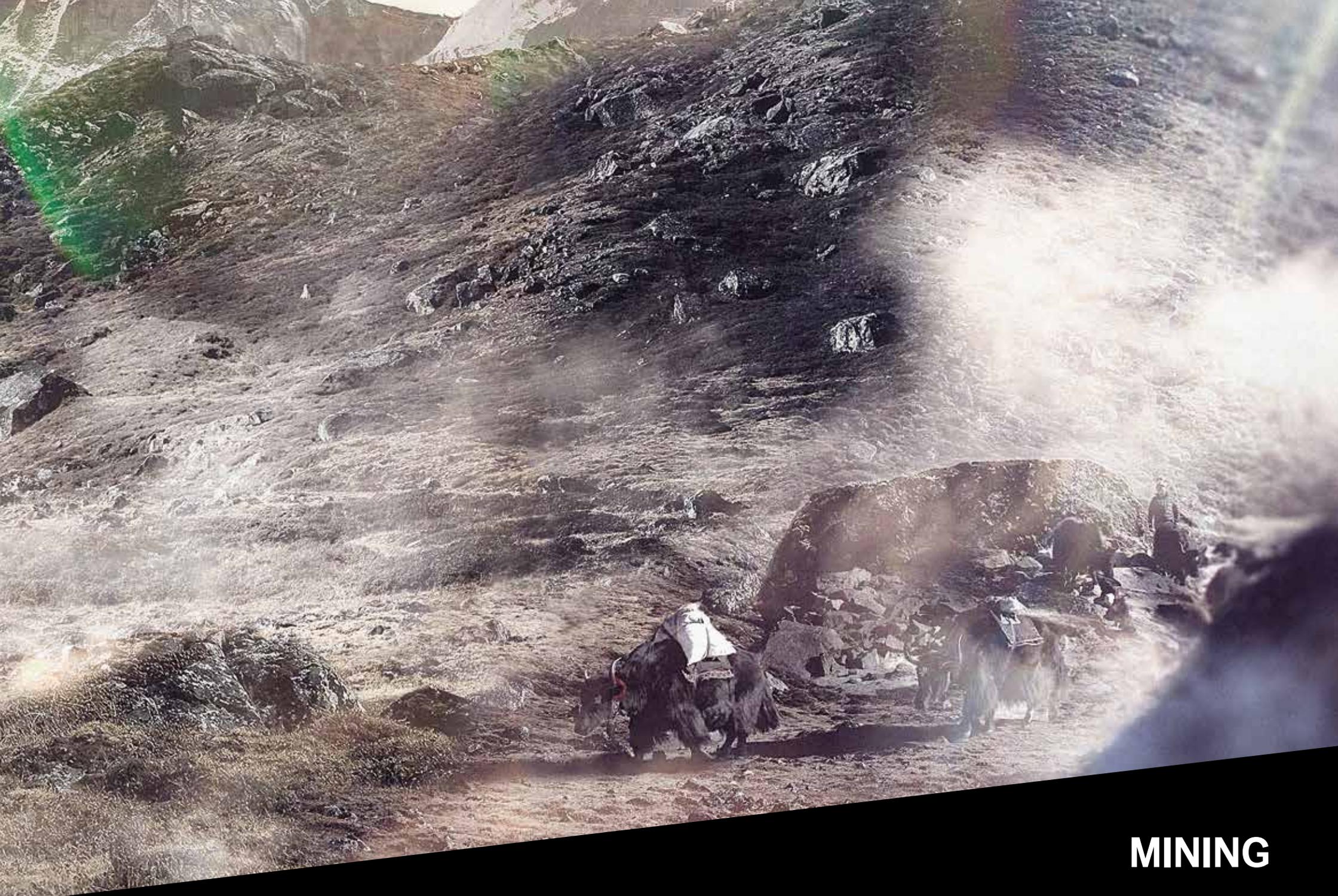
## 02 ELECTRIC HEATING

This is an electric heating unit with outlet temperature limited to 60°C. The PTC heating elements are controlled by a special algorithm that considerably increases their lifespan and maximises their efficiency.

## 03 CONTROL UNIT

Being generally unsprung vehicles with solid rubber tyres, forklifts and other logistics vehicles operating in warehouses and manufacturing facilities are exposed to heavy vibration and impacts. Wölfle's built-in electronics are designed to withstand these loads.





**MINING**

# 10 MINING

## TRIED AND TESTED PRODUCTS WITH LONG LIFESPANS INSIDE

*WÖLFLE INSIDE!*

---

**Unreal landscapes and vast undeveloped spaces** — In the mining sector, to reach targets quickly and efficiently, every minute counts. That's why a comfortable workspace is extremely important to ensure that a driver can concentrate throughout working hours. In addition, the innovative design of our components ensures the driver's safety. Non-stop 24-hour operation? No problem with Wölfle technology.

### 01 CAB

Individual vehicle cabs for extremely large and heavy machines. These meet the high requirements (e.g. 400tonnes) for roll-over protection. We guarantee a testing standard unmatched in Europe.

### 02 DUST FILTER SYSTEM

A multilevel filter system removes particles and aerosols from the air. An integrated high-performance fan then blows the cleaned air into the cab via the existing heating and air conditioning system.

### 03 HEATING AND AIR CONDITIONING UNIT

Extremely reliable and robust under non-stop operation. The heating and air conditioning units are designed to operate at extreme temperatures from -50° to 55°C.



01



CAB

02



DUST FILTER SYSTEM

03



HEATING AND AIR CONDITIONING UNIT





**MOBILE CRANES**



 01

**SUPERSTRUCTURE CAB**



 02

**OPERATOR CONTROL STATION**



 03

**LIGHTWEIGHT ALUMINIUM DOORS**



**CLEVER. EFFICIENT. CREATIVE**

# MOBILE COMFORT AND EFFICIENCY WITH ASSEMBLIES INSIDE

*WÖLFLE INSIDE!*

**Large construction sites, heavy haulage** — Wherever there are big loads to move, mobile cranes are in continuous operation. Under such conditions, operator comfort is a necessity, as the driver has to be able to concentrate at all times while at work. Wölfle products for all types of mobile cranes ensure comfortable and efficient working.

## 01 SUPERSTRUCTURE CAB

Superstructure cabs are generally equipped with a hydraulic tilting mechanism. To retain this function, a tiltable operator's workplace has been incorporated into the cab. This innovation reduces weight and cost, and makes for a significantly more compact structure. It also ensures optimum ergonomics.

## 02 OPERATOR CONTROL STATION

We are a one-stop shop for complex display and operating systems for high-precision tasks. These are supplied ready-configured and -programmed. Our systems are batch-produced and always 100% tested. They are available in a wide range of variants and delivered ready for use.

## 03 LIGHTWEIGHT ALUMINIUM DOORS

Wölfle lightweight aluminium doors are fully bonded. For individual outfitting of driver cabs, we offer lightweight aluminium doors in a wide range of variants.





**RAIL TRANSPORT**

# 12 RAIL TRANSPORT

## SOPHISTICATED AND RELIABLE SYSTEMS INSIDE

*WÖLFLE INSIDE!*

---

**Safe at maximum speed** — Passenger trains and other rail vehicles are exposed to heavy vibration and impacts, which their materials and fixtures must be able to withstand for long periods. Even under these extreme conditions, the safety of vehicle users, along with fire protection, must be guaranteed. To comply with stringent rail safety regulations, our individual components for rail transport meet the highest quality standards.

### 01 CLIMATE CONTROL SYSTEM

A perfect view and a comfortable workspace are essential in all weather conditions. Our 100% customised HV/AC-systems guarantee reliable and trouble-free operation at all times.

### 02 BATTERY COOLING SYSTEM

To ensure long lifespans, lithium polymer cells must be kept at a uniform temperature, constant to  $<1^{\circ}\text{K}$ . Battery cooling systems with integrated thermal management can achieve this with minimal additional use of energy.

### 03 ELECTRIC HV/AC

Electric systems cannot make use of the free exhaust heat generated by combustion engines. Heating energy must be supplied electrically. Electric heating and air-conditioning units specially designed to run without voltage conversion are highly effective in this case.



01



**CLIMATE CONTROL SYSTEM**



02



**BATTERY COOLING SYSTEM**



03



**ELECTRIC HV/AC**





**SPECIAL VEHICLES**



01

HEATING AND AIR CONDITIONING UNIT



02

CENTRAL ELECTRICS



03

CAB



**CLEVER. EFFICIENT. CREATIVE**

# EXTRAORDINARY JOBS, EXTREME SOLUTIONS INSIDE

*WÖLFLE INSIDE!*

**Icy temperatures and crunching snow** — Special vehicles and their drivers have to work in extreme conditions. That's why they need technology to perform reliably and above all safely! When working on steep slopes and sites with low visibility, in wind and weather, or under large temperature differences, integrated Wölfle technology can cope with the most difficult operating conditions!

## 01 HEATING AND AIR CONDITIONING UNIT

Whether operating in double-digit minus temperatures or under blazing sun, the cab remains at the optimum temperature and is fully protected against window fogging.

## 02 CENTRAL ELECTRICS

Even under adverse conditions, our components are simple to repair or can be replaced with plug and play parts.

## 03 CAB

Our cabs are designed and built on a modular concept, allowing them to be optimally tailored to customers' specific requirements.





**ROAD CONSTRUCTION**

# 14 ROAD CONSTRUCTION RELIABLE AND ROBUST ELECTRICS INSIDE

*WÖLFLE INSIDE!*



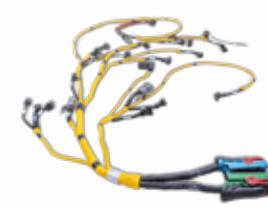
**When the earth shakes** — In road construction, high-precision work is essential despite extreme impacts and vibration. Only the best technology can ensure the appropriate quality and completion on time. Wölfle technology will keep you delivering high quality while avoiding downtime. Even on the most demanding jobs, our products won't let you down!

## 01 MAIN CABLE HARNESS

Cold milling machines are used to break up asphalt and concrete surfaces mechanically. Under these extreme working conditions, cable sets have to withstand very high loads. This is why they are equipped with, for example, moulded connections, and the highest quality standards are adhered to during crimping and installation. Their production is automated to the greatest extent possible (with KOMAX® machines).

## 02 CENTRAL ELECTRICS-CIRCUIT BOARD

Individual components are specially glued or moulded on, and they have special location points. This allows a circuit board with extremely high vibration and shock resistance to be produced.



01

MAIN CABLE HARNESS



02

CENTRAL ELECTRICS CIRCUIT BOARD





**DEFENCE TECHNOLOGY**



01

COOLING



02

PROTECTIVE VENTILATION SYSTEM



03

HEATING AND AIR CONDITIONING UNIT



**CLEVER. EFFICIENT. CREATIVE**

# COMPLETE FUNCTIONAL RELIABILITY WITH COMPONENT TECHNOLOGY INSIDE

*WÖLFLE INSIDE!*

**Difficult, non-overviewable and dangerous operations** — Wölfle components help protect the occupants of military vehicles, and their robust construction guarantees functional reliability and high availability.

## 01 COOLING

This system ensures constant temperatures in the vehicle interior. Cool air must be distributed through the vehicle. For this reason, three vaporisers are operated as parts of one cooling circuit. This is an extremely demanding task, since the system must be operated safely and reliably with max. 15 KW cooling capacity. If the cooling system breaks down, so does the military vehicle.

## 02 PROTECTIVE VENTILATION SYSTEM

Wölfle's system uses an ABEK filter to convert contaminated air into fresh air. This allows drivers' cabs and vehicle interiors to be reliably supplied with fresh, clean air. The protective ventilation system is extremely robust and has a variety of safety features including a pressure monitor.

## 03 HEATING AND AIR CONDITIONING UNIT

These systems must be extremely robust and durable, since they have to continue to operate reliably even after a collision or explosion.

# 16 REFERENCES

---

ALSTOM



bulmor

CLAAS

JUNGHEINRICH



LIEBHERR

Lindner

EvoBus



MAGIRUS

PAUS  
...the people who care

RHEINMETALL  
DEFENCE

SILOKING

ROPA

Linde Material Handling

Linde

K Kässbohrer

Liegler



TEREX

IVECO

W WIRTGEN

REFORM

FAYMONVILLE  
TRAILERS TO THE MAX

Schlingmann  
FEUERWEHRFAHRZEUGE

MAFI  
TRANSPORT SYSTEMS

W KRAMER

W WEIDEMANN



FENDT

JOHN DEERE

TADANO

DEUTZ FAHR

STILL



*CABS / HVAC / ELECTRONICS / ELECTRICS / SALES*

---

WÖLFLE GmbH  
Biberacher Straße 63  
88416 Ochsenhausen

T +49 (0) 7352 / 929 - 0  
F +49 (0) 7352 / 929 - 139

[www.woelfle-gmbh.de](http://www.woelfle-gmbh.de)  
[vertrieb@woelfle-gmbh.de](mailto:vertrieb@woelfle-gmbh.de)

