

THE RANGER

Product Page Content (US / UK English)

HERO SECTION

MINING · INDUSTRIAL · VEHICLE

The Ranger: Industrial Fire Detection & Suppression

Advanced fire detection and suppression engineered for vehicles, mining equipment, industrial machinery, generators, and enclosed electrical environments. Built for demanding conditions where reliability is not optional.

[\[Request a Quote\]](#) · [\[View Specifications\]](#)

LHD Linear Heat Detection Cable | **PT100** Temperature Monitoring | **2 Mode** Standard + High Temp Profiles

International Patent Application No. PCT/AU2023/050224

PRODUCT OVERVIEW

The Ranger

The Ranger is an advanced fire detection and suppression system from The Fire Knight Ranger Series, engineered specifically for vehicles, industrial machinery, mining equipment, engine bays, and enclosed electrical environments.

Built for demanding conditions, the Ranger combines intelligent electronics, industrial-grade engineering, and rapid automatic suppression technology designed to help contain fires before they escalate, in environments where traditional fire protection cannot be installed.

With marine-grade stainless steel construction, battery backup, audible alarms, and emergency lighting, the Ranger keeps working through power interruptions and the harsh operating conditions found across mining, infrastructure, and heavy industry.

[\[Explore Features\]](#) · [\[WhatsApp Us\]](#)

DETECTION TECHNOLOGY

Five Detection Technologies. One System.

The Ranger uses five complementary detection technologies to identify developing fire conditions quickly, while actively reducing the false alarms that disrupt operations.

This multi-technology approach is especially valuable in demanding environments such as mining equipment, engine bays, and heavy machinery, where heat, vibration, dust, and extreme temperatures defeat traditional single-sensor systems and drive up nuisance alarms.

By combining advanced detection, automatic suppression, and rugged industrial-grade construction, the Ranger delivers dependable protection where reliability, equipment uptime, and personnel safety are critical.

PT100 Temperature Monitoring

A precision resistance temperature detector provides continuous, accurate measurement of critical components, catching abnormal heat rise before it reaches the ignition threshold. Precision thermal sensing.

Linear Heat Detection (LHD) Cable

A specialist detection cable is routed through engine bays, along machinery surfaces, or within enclosed spaces. It detects heat along the entire cable length rather than at a single point, which is ideal for large machinery and vehicle engine compartments. Zone-wide coverage.

Environmental Profiling

The Environmental Profile Selector (Standard or High Temp) lets the system be calibrated for its specific operating environment, preventing false activations in naturally high-heat areas such as engine bays and foundries. Adapts to environment.

Pressure Monitoring

Continuous cylinder-pressure monitoring keeps the suppression system ready to discharge. Low-pressure alerts warn operators before system integrity is compromised, with a dedicated Low Pressure LED on the control panel. System integrity check.

Manual Activation

A protected manual activation button lets operators trigger suppression directly when they spot a fire, providing human override alongside the automatic response. Operator override.

HOW IT WORKS

From Threat Detection To Suppression, Automatically

- 1. Continuous Monitoring:** PT100 sensors, LHD cable, and pressure monitoring run continuously, scanning for abnormal heat signatures, temperature rise, and system status changes in real time.
- 2. Threat Identified:** Multi-sensor confirmation triggers a fire condition. Environmental profiling keeps the activation threshold appropriate for the specific environment, minimizing false alarms.
- 3. Alert Activated:** The audible alarm sounds and emergency lighting activates immediately. Status LEDs show Triggered on the control panel, alerting operators before suppression deploys.
- 4. Suppression Deploys:** The suppression agent discharges automatically through the engineered nozzle system, directly at the fire zone, containing the fire before it escalates to catastrophic machinery or vehicle loss.

TECHNICAL SPECIFICATIONS

Built To Industrial Standards

Product Name: The Ranger

Series: Ranger Series

Detection Technologies: PT100 / LHD / Env. Profile / Pressure / Manual

Linear Heat Detection: LHD cable integration, full-length coverage

Temperature Monitoring: PT100 resistance temperature detector

Environmental Profiles: 2 modes, Standard (1) / High Temp (2)

Manual Activation: Yes, protected lift-cover button

System Status Indicators: Power, Armed, Triggered, Low Pressure, Fault

Audible Alarm: Yes, integrated

Emergency Lighting: Yes, integrated

Power Supply: Primary plus battery backup capability

Applications: Vehicles, mining HEMM, industrial machinery, generators, electrical enclosures

Construction: Marine-grade stainless steel components

Standards: Designed and tested to recognized industry standards

Patent: PCT/AU2023/050224

[\[Download Spec Sheet\]](#) · [\[Request Compliance Docs\]](#)

APPLICATIONS

Where The Ranger Is Deployed

The Ranger is purpose-built for environments that face the highest fire risk and where no effective automatic protection previously existed.

Mining Equipment (HEMM)

Haul trucks, shovels, drilling rigs, loaders, and dozers operating in coal, iron ore, bauxite, and limestone mines. Protected zones: engine bay, hydraulic systems, and electrical enclosures.

Commercial Trucks & HGVs

Engine-bay fires from diesel leaks, turbocharger heat (500 to 600 degrees C), and hydraulic spray can cause total vehicle losses that early suppression would prevent. Protected zones: engine bay, cab area, and fuel system.

Buses & Coaches

Many jurisdictions mandate fire suppression for buses above a set passenger capacity. The Ranger provides the automatic engine-bay protection needed for compliance. Protected zones: rear engine, wheel arch, and electrical systems.

Industrial Machinery

Hydraulic presses, CNC machines, compressors, and production equipment, where hydraulic oil, coolant leaks, and electrical faults create serious fire risk in unmonitored machinery compartments. Protected zones: hydraulic systems, electrical enclosures, and control panels.

Generators & Power Equipment

Generator enclosures are high-risk environments where fuel, heat, and electrical faults combine. The Ranger provides automatic protection without requiring anyone on site. Protected zones: generator room, fuel system, and control enclosure.

Construction Equipment

Excavators, cranes, concrete pumps, and piling rigs used across infrastructure projects, all carrying high fire risk from hydraulic systems, diesel fuel, and electrical faults on remote sites. Protected zones: engine compartment, hydraulic lines, and cab area.

FAQ

Frequently Asked Questions

What makes the Ranger different from a standard fire extinguisher?

The Ranger operates automatically and continuously, with no person required on site. A standard extinguisher needs someone to spot the fire, retrieve the unit, and operate it by hand. In mining equipment, engine bays, and enclosed machinery, a fire can escalate to total loss in seconds, faster than any manual response. The Ranger detects and responds on its own.

Does the Ranger meet mining regulatory requirements?

The Ranger is engineered for heavy mobile mining equipment (HEMM) and is designed and tested to recognized industry standards. Full compliance documentation is available on request, and our team can map the system to the specific regulatory framework in your region.

Will the Ranger keep working if the vehicle loses electrical power?

Yes. The Ranger includes battery backup capability, so detection, alarms, emergency lighting, and suppression remain available during a power interruption or an electrical fault on the host machine.

What is Linear Heat Detection (LHD) cable and how does it work?

LHD cable is a specialist detection cable routed through the protected area, such as along an engine bay or machinery compartment. Unlike a point sensor, it detects heat along the entire length of the cable, covering a wide area. That matters on large machinery, where a single-point sensor would miss a fire starting in a remote corner of the protected zone.

What is the difference between Standard Mode and High Temp Mode?

The Environmental Profile Selector calibrates the activation threshold for the operating environment. Standard Mode suits normal ambient conditions. High Temp Mode raises the threshold for naturally hot areas such as engine bays and foundries, so routine operating heat does not trigger a false activation.

Can the Ranger be installed on existing vehicles and machinery?

Yes. The Ranger is designed as a retrofit as well as a factory-fit system. Modules, LHD cable, and the control panel mount to existing equipment, and installation should be carried out by a qualified fitter to keep detection coverage aligned with the protected zones.

[Have More Questions? Contact Us]

GET IN TOUCH

Enquire About The Ranger

Tell us about the machinery, vehicle, or equipment you need to protect, and our team will recommend the most suitable Ranger configuration for your application, along with a tailored, no-obligation quotation.

WhatsApp (Fastest Response): Available 7 days. Typically responds within 3 to 4 hours.

+91 9714269162: Monday to Saturday, 9 AM to 6 PM IST

sales.india@thefireknight.com: For detailed inquiries, proposals, and distributor applications

Get A Free Consultation

Full Name · Company · Phone Number · Email Address · Application Type · State / Location · Equipment / Application Details

Details placeholder: Describe the equipment or vehicle you need to protect, including make, model, number of units, and any specific requirements or compliance questions.

We respond within 4 business hours. Your information is kept strictly confidential.

ALSO FROM THE FIRE KNIGHT

Explore Our Other Systems

The Guardian: Autonomous outdoor and wildfire suppression system

The Protector: Indoor ceiling-mounted fire suppression for homes and offices

The Comodo: Compact fire safety for enclosed and high-value spaces

The Sentinel: Vehicle fire suppression for EVs, trucks, and heavy machinery

Disclaimer: The Fire Knight systems are fire suppression aids and are not classified as fire extinguishers.

International Patent PCT/AU2023/050224

Editorial Notes

- Spelling converted to US English: minimizing, recognized, organization, inquiries.
- All em dashes and en dashes removed and replaced with colons, commas, parentheses, or full stops. The temperature range now reads "500 to 600 degrees C".
- India-specific framing removed for a US/UK audience: the "Where Ranger Protects India" heading is now "Where The Ranger Is Deployed", and state lists (Jharkhand, Odisha, etc.), "India has 5M+ commercial trucks", "600,000+ diesel generators", and "our India team" were cut.

- The DGMS FAQ was generalized to "mining regulatory requirements" and the bus-compliance line to "many jurisdictions", since DGMS and the Indian Motor Vehicles rules are India-specific. Confirm the equivalent standards you want to cite for US/UK markets.
- Three collapsed FAQ answers (mining regulations, power loss, standard vs high temp, retrofit) were written out in full from the product spec. Please verify against your compliance documentation before publishing.
- No keyword list was supplied for this page; the source copy already carries the core industrial and vehicle fire-suppression terms. Send keywords if you want specific phrases worked in.