

Hi-G-Tek

Hatch Seal- Tanker Truck Monitoring System



Wireless

The Hatch Seal is a rugged, durable, wireless electronic data sealing and sensing device that provides robust physical security as well as automatic processing and real-time monitoring of assets, and secured cargo both in transit and in storage.

The Hatch Seal uses Highly Intelligent RFID (Radio Frequency Identification) wireless technology- and includes a transmitter/receiver unit, read/write capability, real-time clock, memory and patented sensing circuitry for sealing verification.

The physical protection provided by the Hatch Seal is equivalent to that of an alarm tag. Encrypted and embedded sensors prevent any attempt at detaching, bypassing, or tampering with the Hatch Seal. The system detects any such attempt, records the event, and sends an alert as needed. At the core of every Hi-G-Tek device is the patented and trademarked "DataSeal™" sensing system.

The Hatch Seal is powered by an internal battery which uses patented energy management technology to provide years of maintenance free operations.

In low-frequency short-range mode, the Hatch Seal logs and communicates data through the Master Handheld Terminal and can also be inspected and/or set by a small key-fob unit called the MicroReader. The Hatch Seal can store manifest information electronically in memory. The information can include vehicle ID, container and invoice numbers, cargo descriptions, quantities and destinations.

The high frequency long-range mode provides full two-way read/write data communication capabilities at a distance of 100+ meters with fixed or mobile readers. The Hatch Seal transmits the information in reply to an interrogation by the Hi-G-Tek DataReader or when it detects an unauthorized event. Many Hi-G-Tek devices such as Hi-G-Locks, Hi-G-Tags and Hi-G-Seals, can be monitored simultaneously by one Hi-G-Tek DataReader™.

This long-range capability makes the Hatch Seal ideal for protecting, tracking, sealing, and verifying of assets such as containers, fuel and rail tankers.

Successful monitoring can also include stationary objects such as ingress/egress portals, yard/gate management systems, refineries, fuel depots, and finally, pump and tank delivery systems at gas/petrol stations.



Features:

- Reusable wireless electronic lock
- Extended maintenance-free operation with no recharging
- Secure short- and long- range wireless communication
- Comprehensive environmental and RF certifications
- Approved for use on fuel tanker trucks and associated environments

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Technical Specifications

- **Installation Environment:** Designed for extended outdoor use
- **Vibration and Shock:** Complies with MIL-STD- 810D for mobile equipment and SAE J1455

Read Range:

- **Low Frequency:** 40cm
- **High Frequency:** 100+ meters in open space

Antenna Characteristics:

Beam Divergence:

- **Omni-directional (on non-metal wall)**
- **Hemispherical (on metal wall)**

Software Features:

Memory:

- **User Memory:** 3K Bytes
- **Events Memory:** Up to 100 events

Life Expectancy:

Service Life: 4-5 years at 50 readings per day

Housing:

Splash-proof plastic made to withstand a fuel environment

Certifications:

- **CE:** EMC Radio & Safety
- **ATEX:** II 2 G Ex ia IIB T4
- **UL:** HazLoc Exia Division 1 Class 1 Groups C&D
- **DHS:** Safety Act Certified
- **FCC:** Part 15 Sub Part C

Features:

- Monitors and controls all Hi-G-Tek edge devices
- Internal power supply and storage to ensure reporting of all events
- Optimized vehicular antenna
- Rugged and robust mechanical design
- Over the air programming and maintenance

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