

MACHINE HEALTH MONITORING SOLUTIONS IN IP69K WASHDOWN ENVIRONMENTS

APPLICATION NOTE

This application note offers guidance on deploying **GraceSense™ Machine Health Monitoring Solutions** in IP69K-rated environments characterized by high-pressure, high-temperature conditions. It focuses on product modifications and installation best practices for optimal functionality and reliability.

Benefits of IP69K Rating: Our IP69K-rated solutions enhance protection and ensure that monitoring equipment withstands harsh conditions without damage. These systems support proactive maintenance strategies by maintaining reliable data collection in extreme environments and complying with stringent hygiene and safety standards.

IP69K RATING EXPLAINED

- **(6) Dust-Tight:** Complete protection against dust ingress.
- **(9K) High-Pressure, High-Temperature Water Jets:**
 - Water temperatures up to 80°C (176°F)
 - Water pressures of 80 to 100 bar (1160-1450 psi)
 - Water flow rate of 14-16 liters per minute
 - Close-range (10-15 cm) high-pressure spray from various angles

IP69K PRODUCTS AND SPECIFICATIONS:

GraceSense™ VBTx Vibration and Temperature Sensor

The VBTx provides real-time monitoring of equipment health, utilizing vibration and temperature measurements to ensure operational integrity. It is durable, battery-powered, and integrates seamlessly with GraceSense™ gateways for in-depth data analysis.



- **Installation Options:** Offers flexible installation options with a magnetic base for easy adjustment on metal surfaces and epoxy mounting for secure, permanent placement on stainless steel or other non-magnetic materials.

GraceSense™ Gateways with MagView™ Housings

Standard GraceSense™ gateways come in basic housings that do not meet IP69K standards. For applications requiring higher levels of protection, you can upgrade to our MagView™ housing, engineered to endure extreme cleaning procedures without compromising the integrity of the gateway or connected systems. Upgrading to MagView™ provides the following benefits:

- **UL Listed:** Padlockable housing that is UL Listed and IP69K rated that can be installed on panels in washdown environments.
- **Space-Saving Design:** Features a low-profile, compact form with a magnetic lid for quick and easy access.
- **Highly Durable:** UV rated and IP69K certified, making it perfect for use in environments that require exceptional cleanliness and exposure to high-pressure, high-temperature washdowns.

MagView™ Gateway Part Number Examples:



CloudGate:
G-XX-W1W2-M9XX



ControlGate:
G-EIP-W1-M9XX



ComboGate:
G-EIP-W1W2-M9XX

INDUSTRIES AND APPLICATIONS

Industries adopting GraceSense™ solutions benefit from enhanced reliability and operational efficiency by detecting early signs of equipment wear and preventing costly downtime. These solutions are tailored to address the unique challenges of various sectors, ensuring seamless operations even in the harshest environments. Notable industries and applications include:

- **Food and Beverage:** Prevent downtime by monitoring critical components like pumps and chillers.
- **Pharmaceuticals:** Maintain continuous operation of essential machinery in cleanroom environments.
- **Chemical Manufacturing:** Monitor equipment exposed to corrosive substances for signs of degradation.