

Teknikum® Wireless Smart Hose system



APPLICATIONS

Teknikum® Wireless Smart Hose system is a next generation product on Teknikum industrial hose wear monitoring applications, which enables off-site monitoring of wear and tear of inner lining of a smart hose. The system gives the user a valuable warning of the condition of the hose by alerting that the service life of the hose is coming to an end, and it needs to be soon changed to avoid hose breakage and unplanned production stops.

The **Teknikum® Smart Hose system** includes **IoT Gateway, Wireless Smart Hose Sensor** device and customer specific Teknikum GRANIT® or TITAN™ **Smart hose** built with monitoring cable. The Wireless Smart Hose Sensor sends data to the IoT Gateway, which is connected to a secure cloud-based monitoring service.

Depending on the selected Smart Hose construction, the wear and tear may be monitored up to two separate sensor layers or four different measurement sectors. Please inquire possible and suitable hose constructions from our sales.

Teknikum Wireless Smart Hose system is supplied with instructions and with customer specific abrasive material hose. The sensor devices are reusable after Smart Hose replacement.

ADVANTAGES

- Increased work and environmental safety
- More efficient, easy plant management as hose's life cycle can be anticipated
- Uninterrupted process flow
- No uncontrolled process stops
- Maintenance savings
- New hose can be purchased just in time or as planned
- Teknikum® abrasive hoses are compatible with Wireless Smart Hose system

TECHNICAL PROPERTIES (BRIEF)

Smart hose

- Sensor wire location customizable, at default alert is set to 20 % remaining wear resistant inner lining
- Up to two separate sensor layers OR four different measurement sectors (see reference image below)

Wireless Smart Hose Sensor

- Battery powered, up to 10 years of expected battery life
- Temperature range -20 °C + 80 °C
- IP 55 enclosure
- Fixed connectors, plug and play installation
- Customizable measurement cycle

IoT gateway

- 300* m wireless range to sensors (*varies by installation location)
- Up to 100 sensors to one gateway
- 4G LTE CAT-NB2 connectivity
- Encrypted security (256-bit Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Up to 60 h backup battery
- Temperature range +5 °C + 45 °C
- Industrial version available:
 - IP65 rated enclosure
 - Wider temperature range -20 °C + 55 °C

Alerts

- Alerts / Status updates are delivered to the customer by e-mail
- Customizable alerts: Wear status, Battery status, System state and more

- Teknikum GRANIT® Select couplings
- Teknikum TITAN™ Select couplings

SYSTEM COMPATIBILITY

We recommend following Teknikum hoses and connectors for your Wireless Smart Hose system:

- Teknikum GRANIT® CERAMIC Antistatic hose
- Teknikum TITAN™ CERAMIC Antistatic hose
- Teknikum PLUS™ flange system for hose connecting OR

MANUFACTURER

Teknikum Oy (Business ID FI07645274),
Nokiankatu 1, 38210, Sastamala, Finland

More information

sales@teknikum.com
www.teknikum.com



ORDER REFERENCE

Ask more from sales. Complete technical information available on instructions manual.

REFERENCE IMAGES

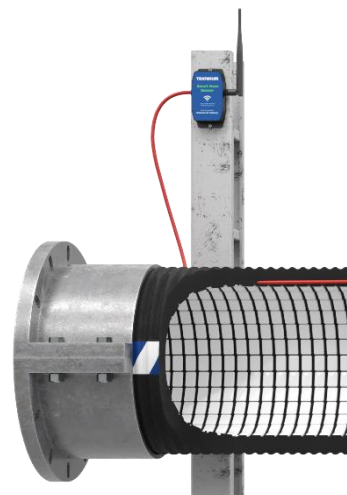
IoT gateway



Wireless Smart Hose Sensor



Smart hose



Hose wear monitoring options



Monitoring with up to two separate layers



Monitoring with up to four separate sectors