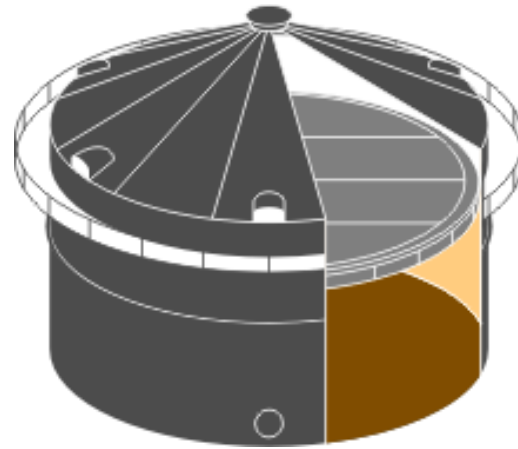
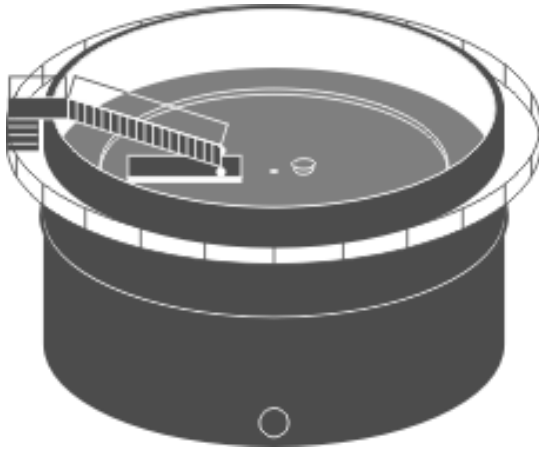


# WirelessHART FR-Tracker™

## Aboveground Storage Tank Floating Roof Monitoring Solution Package



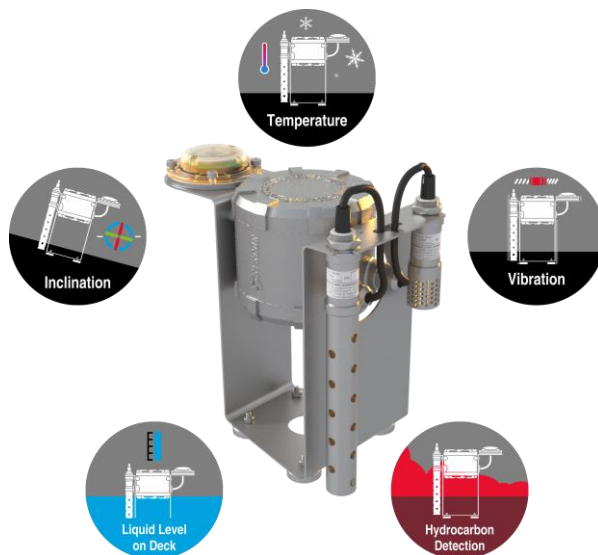
### Application Challenge

Floating roof monitoring solutions for aboveground storage tanks must be able to detect, quickly, accurately, and reliably, any changes in key roof operating parameters, such as inclination, acceleration/vibration, temperature, and the presence of hydrocarbons and/or water that indicate conditions exist that could lead to failure of the floating roof.

### Syscor's Solution

Syscor developed the WirelessHART FR-Tracker Floating Roof Monitoring System in close cooperation with the petroleum industry as an effective and economical solution.

The WirelessHART FR-Tracker Solution Package provides all of the components required for rapid deployment of the floating roof monitoring solution in the field.

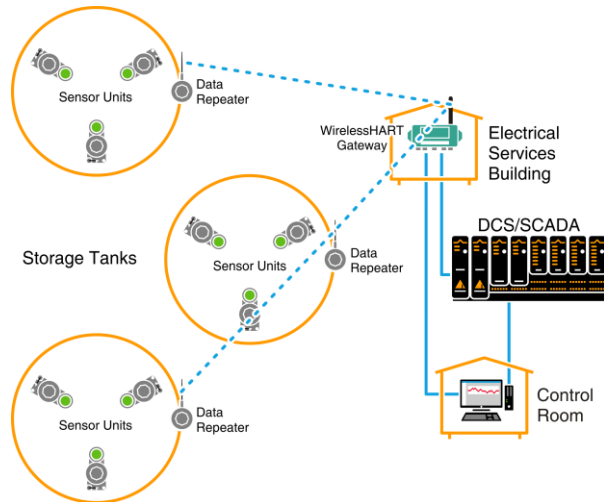


### Features and Benefits

- Intrinsically safe design for Zone 0 deployment
- Extensively tested and independently qualified devices
- Stainless steel (SS316) construction
- Wireless, battery powered units allow rapid deployment
- Easily installed on in-service storage tanks; no welding or drilling needed for Field Transmitters or Inclinometers
- Intrinsically safe Syscor designed Li-SOCl<sub>2</sub> battery packs provide up to 10 years of power
- Performs reliably in temperature ranges from -40 to +60°C [-40 to +140°F]
- Syscor's polymer absorption sensor formulations provide accurate, reliable and rapid detection of liquid and gaseous hydrocarbons (C<sub>3</sub> and heavier)
- Detects changes in key operating parameters that can indicate the following conditions:
  - Excessive rain water accumulation/snow load
  - Buoyancy loss (ponton leak/punctured deck)
  - Presence of hydrocarbons, abnormal %LEL levels
  - Delayed roof collapse due to seismic events
  - Roof misalignment, sticking seals, sticking ladders
  - Abnormal rotation of the floating roof
  - Large gas bubbles in liquid product
- The use of several monitoring units on one floating roof increases data reliability and supports zero-incident operations
- WirelessHART (IEC 62591) mesh technology creates self-forming, self-healing, scalable, secure networks
- WirelessHART technology allows easy addition and removal of units from an existing network
- Integrates easily with industry standard WirelessHART Gateways
- Syscor Tracker™ monitoring software supports standalone applications

### How it Works

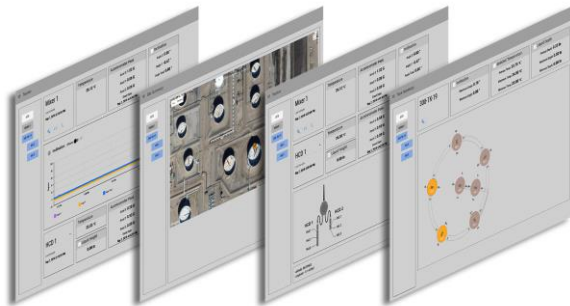
Several WirelessHART Field Transmitter assemblies, mounted on the floating roof, detect inclination, temperature, acceleration/vibration, water level, and the presence of hydrocarbons. Optional WirelessHART Inclinerometer assemblies may also be attached to pontoons or the rolling ladder for external floating roof storage tanks. The monitoring units send sensor data, as well as battery and network status, via the WirelessHART standard to a Data Repeater, which sends the signal on to a WirelessHART Gateway. The Gateway then routes the data to the facility's control and monitoring system for analysis and data collection. Alarms are generated and communicated to all appropriate people and systems when key operational parameters are detected.



### Solution Package

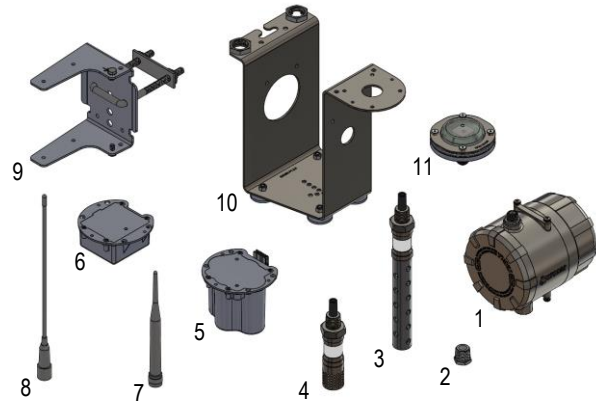
Sycor's WirelessHART FR-Tracker Floating Roof Monitoring Solution Package typically contains the following items:

- WirelessHART Field Transmitter assemblies
- WirelessHART Data Repeater assembly
- WirelessHART Gateway
- Optional WirelessHART Ladder Inclinerometer assembly
- Optional WirelessHART Pontoon Inclinerometer assemblies
- Optional Sycor Tracker monitoring software



Sycor Tracker™ monitoring software

### Products List



#	Item	Qty
1	Field Transmitter PCU w two sensor ports	
-	Data Repeater PCU (not shown, similar to 1)	
-	Inclinerometer PCU (not shown, similar to 1)	
2	Port plug; used with Data Repeater & Inclinerometer PCUs	
-	WirelessHART Gateway (not shown)	
3	HCDW sensor transducer	
4	HCD sensor transducer	
5	4-cell battery pack 7.2V 38.0Ah 273.6Wh	
6	2-cell battery pack 7.2V 19.0Ah 136.8Wh	
7	Omni-directional rigid monopole antenna	
8	Omni-directional whip monopole antenna	
9	Standard mounting bracket	
10	Magnetic mounting bracket	
11	Right hand circular polarized patch antenna	
-	Omni-directional high gain monopole antenna (not shown)	
-	Cable (up to 266.7m/875 ft. maximum total length) (not shown)	

### Typical Assemblies



### How to Purchase

Visit [sycor.com](http://sycor.com) for more information. Contact Sycor to discuss your specific site and application requirements.

### Contact Information

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