

Predictive Corrosion Management (PCM)

Key benefits

- Monitor interior piping wall loss due to corrosion and erosion
- Make informed decisions with the help of analytics
- Manage and mitigate corrosion-related risks to operations
- Reduce inspection-related costs
- Utilize continuous sensor data for better informed asset, maintenance, and process decisions
- Measure corrosion inhibitor program effectiveness
- Improve personnel safety

Identify corrosion risk before it impacts your plant using predictive corrosion management capabilities.

Predictive corrosion management (PCM) combines intelligent software with RightraxPM installed sensors to non-intrusively monitor interior piping wall loss due to corrosion and erosion.

This powerful package allows operators in upstream, downstream, and power to monitor interior wall thickness for piping and other assets with precise schedule-based measurements at higher frequency. It also helps improve the safety of the facility and the personnel, eliminates the need to shut down processes, and to deploy the field maintenance professionals only when necessary.

With analytics and real-time trends and robust visualizations, you can make proactive and informed decisions about asset integrity—reducing the total cost of operations.

Technical specifications

Probes

Sensor type	Sol-gel spray, single element
Measurement type	Pulse-Echo 0° transducer
Couplant	Dry-coupled
Probe dimensions	24x24x16 mm/0.94x0.94x0.63 in
Element sizes	8x8 mm/0.31x0.31 in

Notes

ATEX/IECEX certification	II 1G EX ia IIC T4 ATEX ZONE 0
FM approvals	IS CL I DIV I GP A, B, C, DT4
Power source	Battery
Battery lifetime	>5 years [†]
Ingress Protection	IP67
Max. number probes ^{††} per Mote	64
Max. number thermal couples (type K) per Mote	8
Mote dimensions ^{†††}	275x150x100 mm/10.83x5.91x3.94 in

Weight	3.7 kg/8.2 lb
Communication (wireless)	IEEE 802.15.4e standard (2.4 GHz)
Maximum distance	15 m/49 ft. Mote - antenna
Maximum distance	10 m/33 ft. Mote - probe
Maximum distance	400 m/1,300 ft. ††† Mote - Mote
Certification (safety)	CE, US (UL), CA (CSA)

Consult with Baker Hughes representative for country-specific certifications.

Mote manager

Power source	Power over ethernet
Max. number Motes per Mote manager††††	100
Mote manager dimensions	275x150x100 mm/10.83x5.91x3.94 in†††
Weight†††††	2.4 kg/5.3 lb
Ingress protection	IP67
Communication (wireless to Mote)	IEEE 802.15.4e standard (2.4 GHz)
Communication (wired to gateway)	Ethernet (TCP/IP)
ATEX/IECEX/FM approvals	Not applicable
Certification (safety)	CE, US (UL), CA(CSA)

Consult with Baker Hughes representative for country-specific certifications.

Operation

Operation temperature range 200°C probes	-30°C to 200°C/-22°F to 392°F
Operation temperature range 400°C probes	-30°C to 400°C/-22°F to 752°F
Operating temperature range Mote and Gateway	-30°C to 60°C/-22°F to 140°F

Pipe diameter	2 – 72 in (belts)
Nominal wall thickness (on step block)	3 – 50 mm/0.12 – 1.97 in

Performance

Wall thickness repeatability	±0.02 mm/±0.8 mil Including temperature compensation
Reference wall thickness accuracy	±0.1 mm/±3.9 mil

Browser capabilities

Web browser	Google Chrome
Predix security	www.predix.io/resources/security

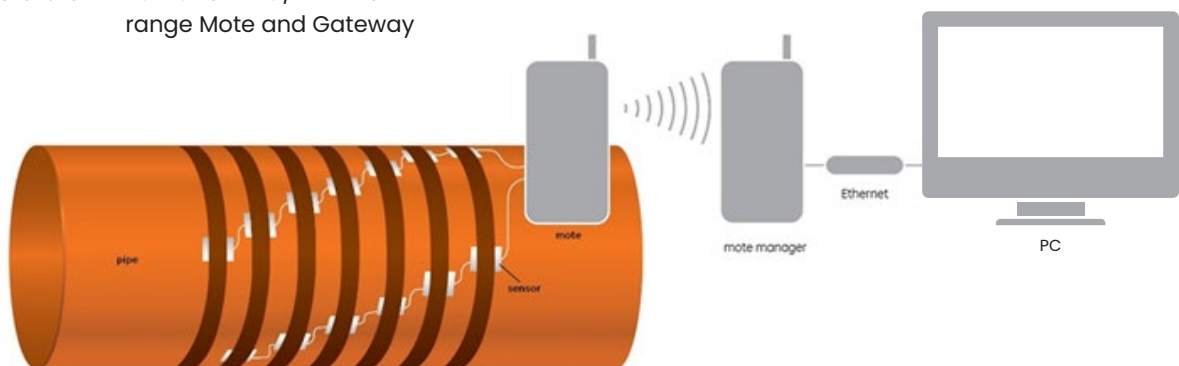
† Based on daily measurements with 64 probes under normal conditions.

†† Default application is in clock positions. Other configurations are possible.

††† Excluding antenna

†††† Actual radio frequency range performance is subject to a number of installation variables including, but not restricted to, ambient temperature, relative humidity, presence of active interference sources, line-of-sight obstacles, and proximity of objects (trees, walls, signage, piping, and so on) that may include multipath fading. As a result, actual performance varies.

††††† Actual performance can vary depending upon network bandwidth or based on deployment topology.



For technical support regarding this product please contact:

All country specific numbers can be found on www.bakerhughesds.com/contact

Baker Hughes 