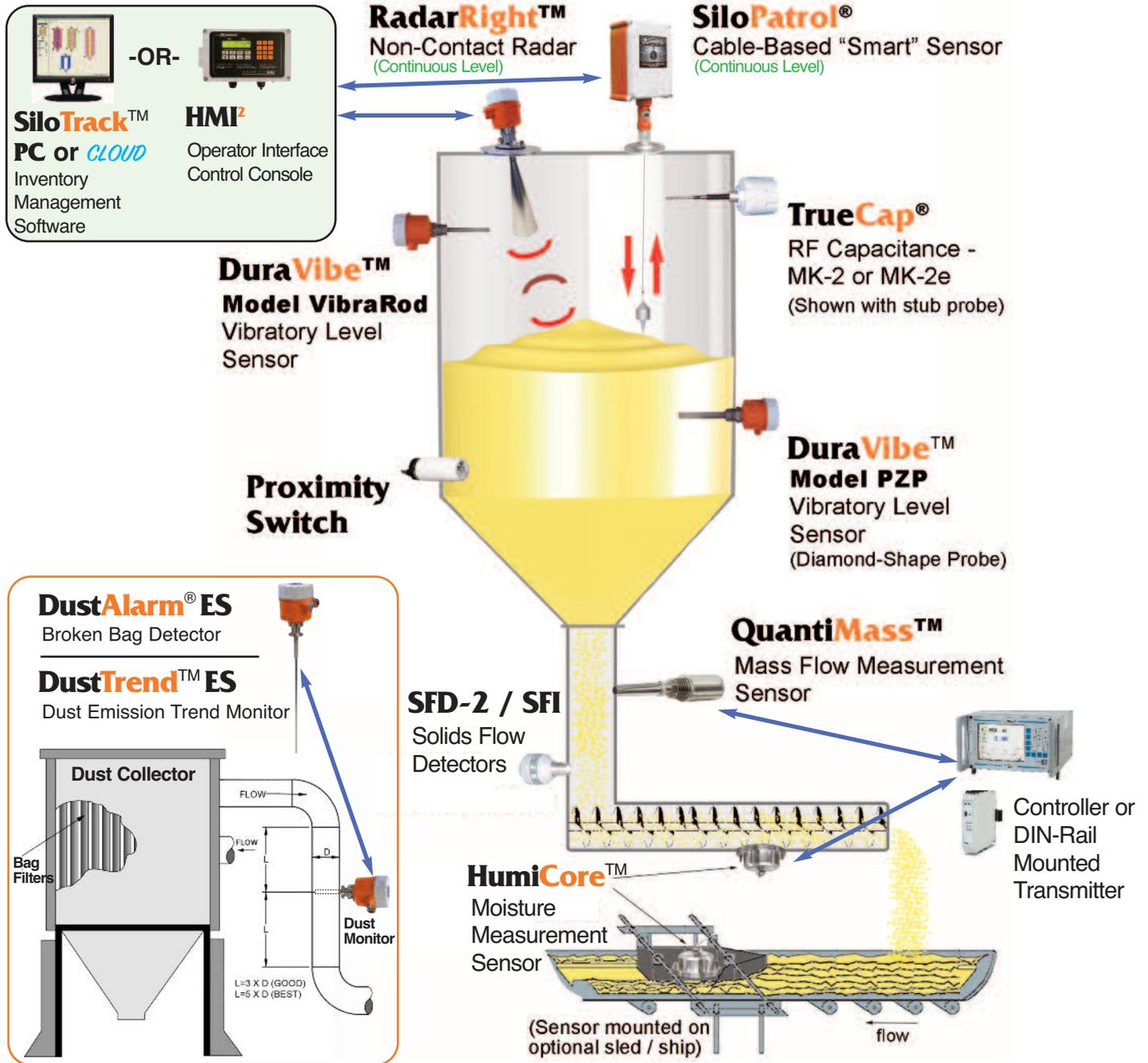


Level, Flow and Moisture Monitoring Solutions For The Storage / Processing of Powders & Bulk Solids



Monitor Technologies LLC is a leading supplier of level measurement, solids flow, moisture measurement, and dust monitoring instrumentation for the worldwide powder & bulk solids markets, as well as, some liquid & slurry markets.

At Monitor, we are dedicated to providing practical solutions in material level measurement and process control backed by trusted customer service. Examples of the services that we offer in support of our products include:

- Expert advice based on 60+ years in business & commitment to providing a solution that fits your specific needs
- On-time, quick delivery for most standard products
- Well-designed and reliable instrumentation...2 Year warranty on most products
- Service department capable of in-factory product support or field service
- Support from sales, application / technical / customer service, engineering, quality assurance, manufacturing and logistics teams representing over 150 years of experience in powder and bulk solids
- ISO 9001 registered quality system that continually pursues "best business practices"



TECHNOLOGIES LLC

www.monitortech.com

Practical Applications - Continuous Level

Factors to Consider for Continuous Level Sensors

Selecting a Sensor Type:

- ▶ How often are measurements required? (Constantly, in Intervals, etc.)
- ▶ What are the target material challenges? (Dielectric, Highly Dynamic / Extreme Conditions, etc.)
- ▶ What type of Interface/Protocol is required? (Analog, RS-485 / Modbus)
- ▶ How often do silos get refilled?
- ▶ Is contact with your material acceptable?
- ▶ Silo dimensions (Height, Width)
 - ◆ Internal obstruction(s) & Flow stream
- ▶ Budget constraints
- ▶ Technical and/or maintenance capabilities of facility?
 - ◆ Electric and Electro-Mechanical
 - ◆ Initial Setup/Programming

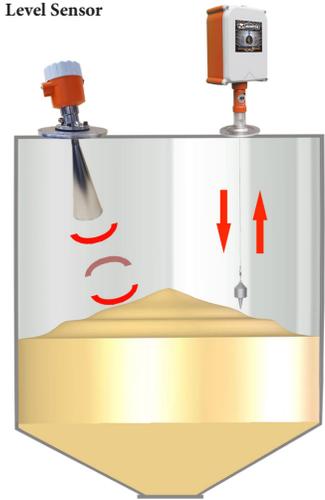
Why Continuous Level:

Continuously monitoring material levels in storage silo and providing inventory management for one location or multiple locations allows you to:

- Take complete advantage of potential volume discounts by utilizing all of the available silo storage capacity.
- Minimize the amount of deliveries & transportation costs.
- Ensure that the complete load you ordered fits in the silo(s), thereby avoiding any material return fees.
- Collect data for accounting and resource planning, such as calculating reorder points to prevent “downtimes”.

RadarRight™
Non-Contact
Radar Real-Time
Level Sensor

SiloPatrol®
Plumb Bob Style
Level Sensor



Operator Interfaces for
RS-485 Versions:



SiloTrack™ CLOUD



HMI²



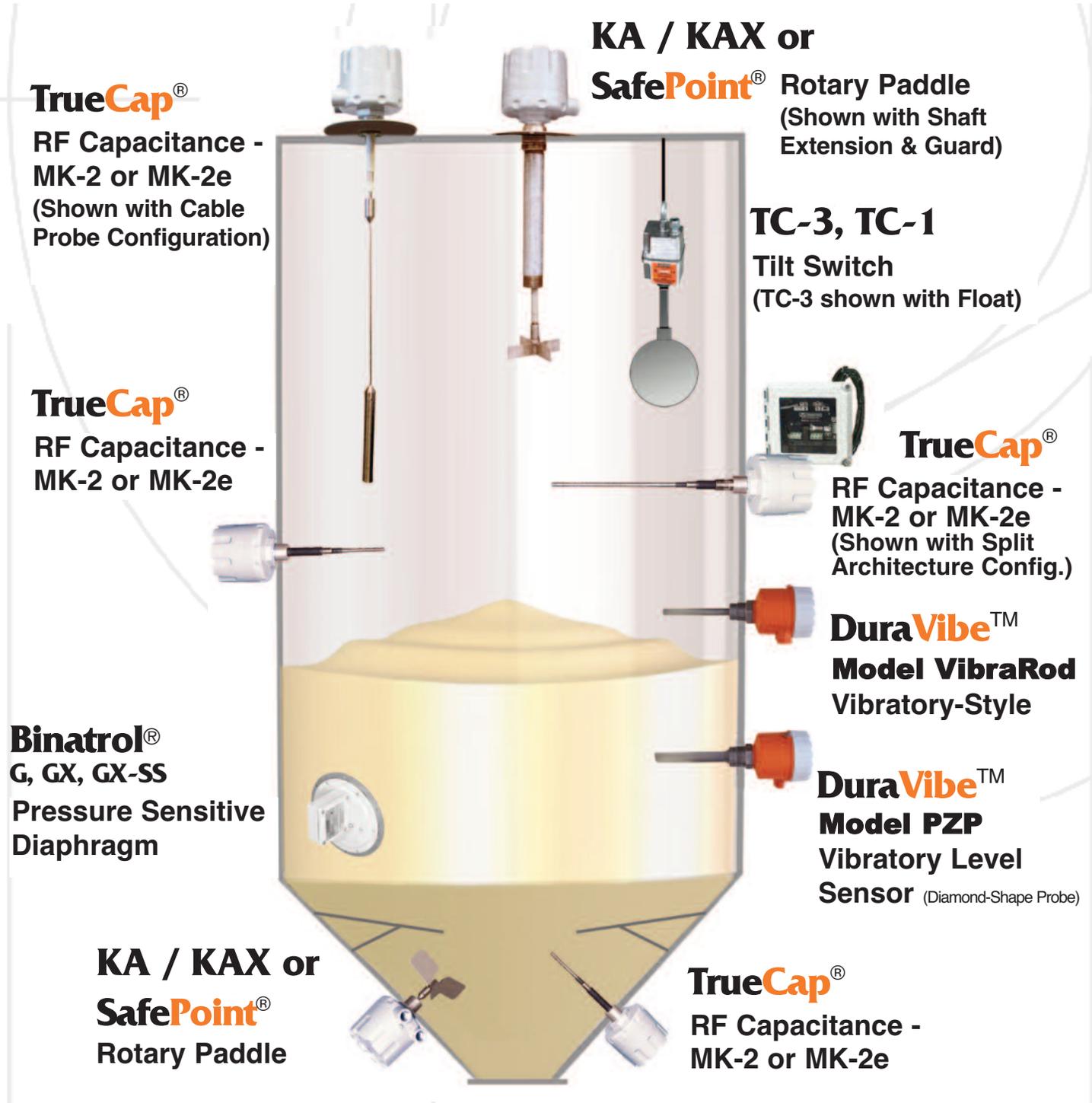
SiloTrack™ PC

(Only Avail.
for
SiloPatrol)

CONTINUOUS LEVEL QUICK REFERENCE CHART

Plumb Bob Style	Non-Contact Radar - 26 ghz
<ul style="list-style-type: none"> ■ Measuring range up to 150 ft (45.7 m) in height. ■ Measurements taken at continuous intervals or on-demand. ■ Not affected by material composition, including dielectric. ■ Electromechanical design. 	<ul style="list-style-type: none"> ■ Measuring range up to 100 ft (30 m) in height for solids and liquids ■ Continuous, instantaneous (real-time) measurements. ■ Non-Contact ...nothing to “touch” your process / target material ■ Material’s dielectric needs to be considered. ■ Electronic...No moving parts.

Point Level Indication Solutions



Why Monitor Technologies...

- Over 150 years of combined experience in powder and bulk solids; Knowledgeable and trusted customer support from sales, application / technical / customer service, engineering, quality assurance, manufacturing and logistics teams representing over 150 years of combined experience.
- Expert advice based on 60+ years in business & commitment to providing a solution that fits your specific needs.
- On-time, quick delivery for most standard products.
- Well-designed and reliable instrumentation; 2 Year warranty on most products; Most sensors built with cast aluminum housings.
- Service department capable of in-factory product support or field service.
- ISO 9001:2015 registered quality system that continually pursues "best business practices".

Point Level Indication Solutions

Reasons for Point Level:

- High, low and/or intermediate point level indication of stored materials.
- Provide silo overflow protection
- Turn “on” or “off” other processes based on the detected presence or non-presence of material.
- High level detection for dust collection hoppers
- Plugged chute detection

POINT LEVEL MONITOR QUICK REFERENCE CHART														
PRODUCT TECHNOLOGY	MATERIAL					DENSITY				TEMP		DIELECTRIC (ϵ_r)		
	Powders	Pellets	Food Grain	Mining / Aggr.	Slurries	Liquids	1.5 - 5 lb/ft ³	5 - 15 lb/ft ³	15 - 35 lb/ft ³	35+ lb/ft ³	Low	to 300°F	> 300°F	Low (<1.5)
Rotary Paddle	✓	✓	✓	✓	✗	✗	●	✓	✓	✓	✓	✓	✓	✓
RF Capacitance Probe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
Vibratory Probe	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	●	●	✓
Diaphragm Switch	✓	✓	✓	●	✗	✗	✗	●	✓	✓	✓	●	✗	✓
Tilt Switch	✓	✓	✓	●	✗	✗	✗	●	✓	✓	✓	●	✗	✓

- ✓ = Applicable
- = Consult Factory
- ✗ = Not Recommended

PRODUCT FEATURES & BENEFITS

Technology

Model KA / KAX

Rotary Paddle

SafePoint®

Fail-Safe

Rotary Paddle



Features & Benefits

- Simple; No adjustments
- Cost effective & versatile...Works in most powder & bulk solids applications
- Electro-mechanical design (Model KA / KAX) or Micro-controller design (SafePoint®)
- Motor shut-off feature maximizes sensor life
- Externally viewable status LED (on SafePoint® Fail-Safe ordinary loc. models)
- SafePoint® is fail-safe on power loss and if there is internal failure in the sensor
- General Purpose, Hi Temp and Haz Loc options
- Variety of paddles to fit your target material and process

TrueCap®

MK-2 & MK-2e

R.F. Capacitance



- No moving parts for longevity; Externally viewable status LED (on ordinary loc. models)
- Superior 0.5pF sensitivity; Maximum reliability and calibration stability
- Simple calibration (MK-2: Push-Button or MK-2e: Potentiometer)
- Driven shield technology to overcome material build-up; Temperature compensation
- MK-2 contains microcontroller with smart sensing algorithms for ultimate reliability & fail-safe protection
- Ord. & Haz. location approvals; Hi Temp versions; Split Arch versions
- Variety of probes & process connections including cable extension and quick-connect versions

DuraVibe™

PZP & VibraRod

Vibratory



- No moving parts
- No calibration required
- Single probe design
- Wide powder & bulk solids material sensitivity (baffle may be required)
- Fail-safe on power failure; Universal power supply
- Ord. & Haz. location approvals; Intrinsically safe probe design; Hi Temp PZP version
- Unaffected by dielectric of material

Model G Series

Diaphragm Switch



- Basic pressure-sensing operation; Reliable, durable and low maintenance
- Electrically-passive sensing method
- Low-profile design is less intrusive; Ideal for plugged chute detection

TC-1 & TC-3

Tilt Switch



- Basic angular-sensing operation; 17° detection sensitivity
- Electrically-passive, mercury-free sensing method
- Easily reposition-able; Ball-type actuator available
- Works good in open pits, stock piles and conveying systems
- Ideal for high level detection