



**Making Silos Smarter and Safer
with SiloSpi**



How it works

The SiloSpi is installed at the top of the silo or bin.

SiloSpi automatically takes measurements of the height of material in the silo and sends this data to the cloud.



Temperature & Humidity Sensor

Level Sensor

Fill Pipe

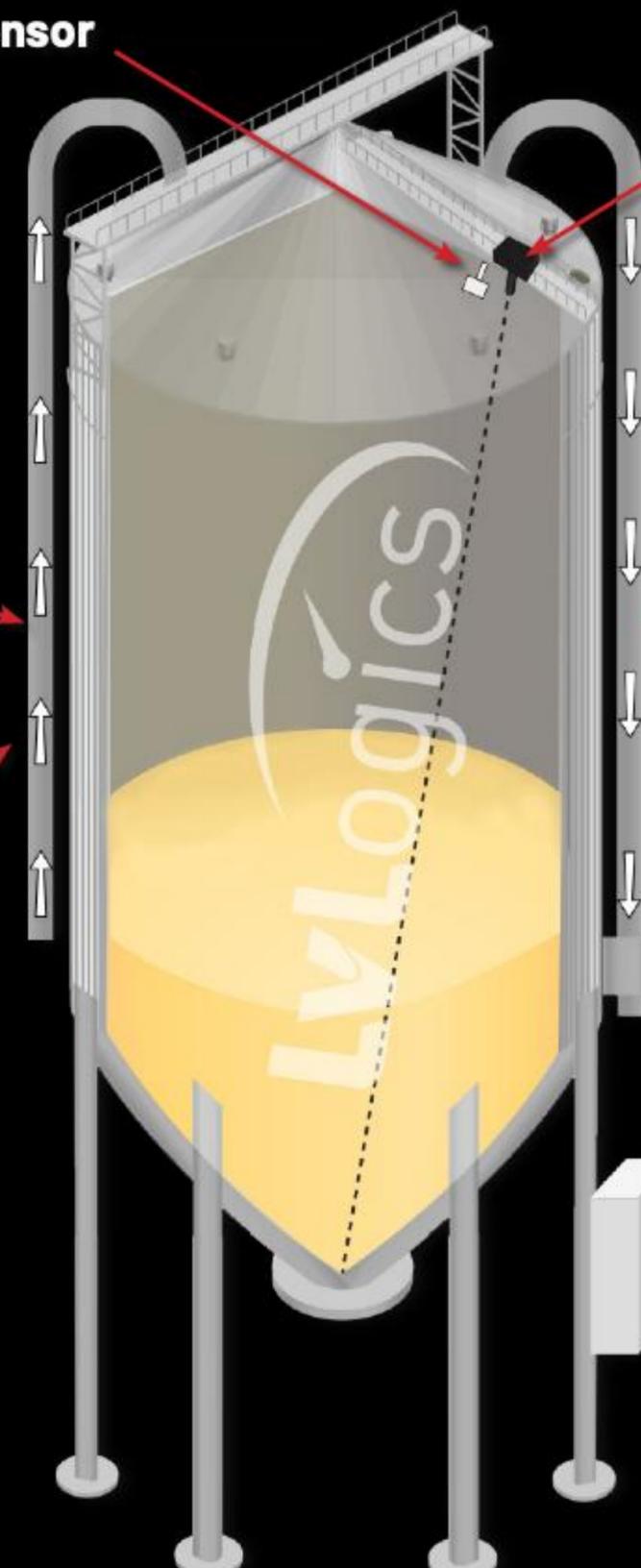
Vent Pipe

Air

Air

Control box

All serviceable parts at bottom of silo.



How it works

The data is accessed via a phone, tablet or laptop by any number assigned users

Configurable Low level alarm messages are sent automatically to designated users



Temperature & Humidity Sensor

Level Sensor

Fill Pipe

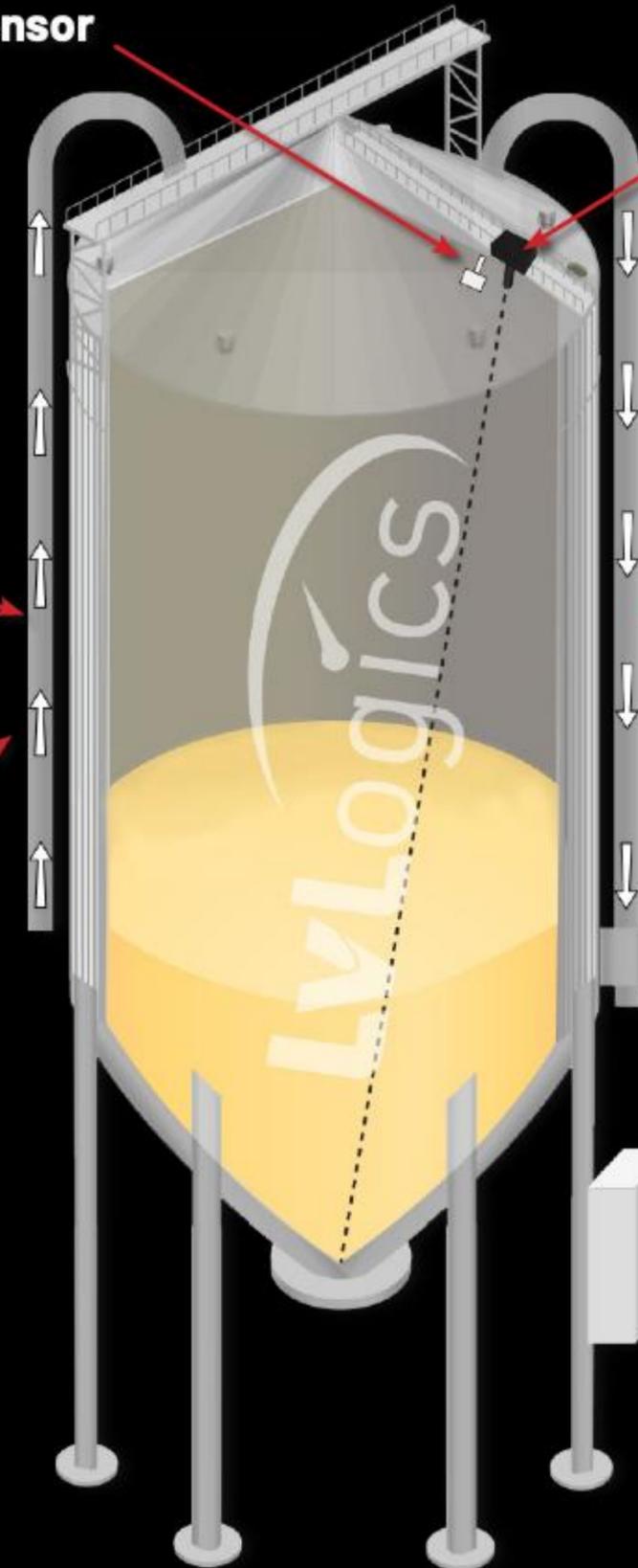
Vent Pipe

Air

Air

Control box

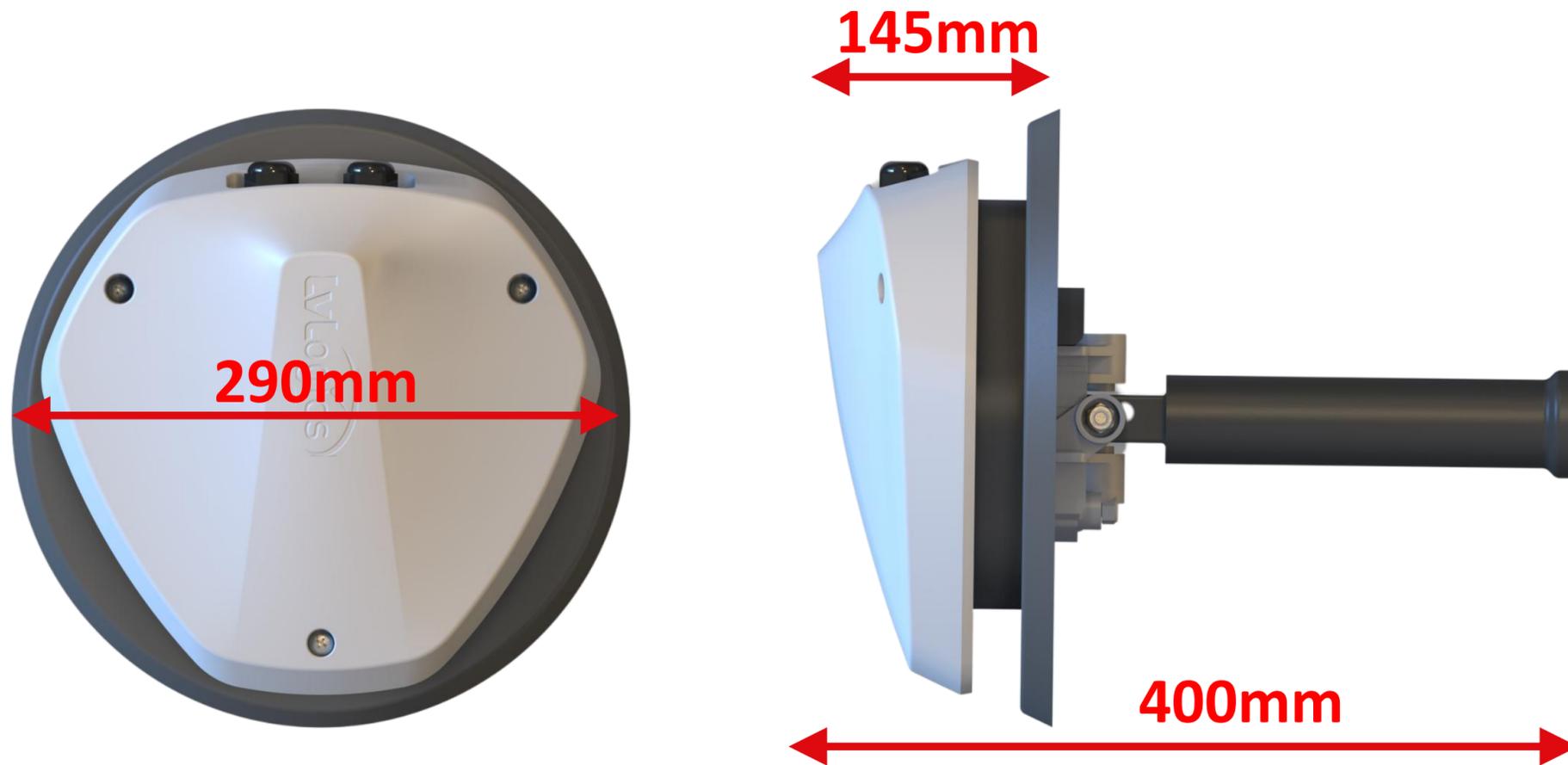
All serviceable parts at bottom of silo.



Designed to fit any Size and Shape of Silo

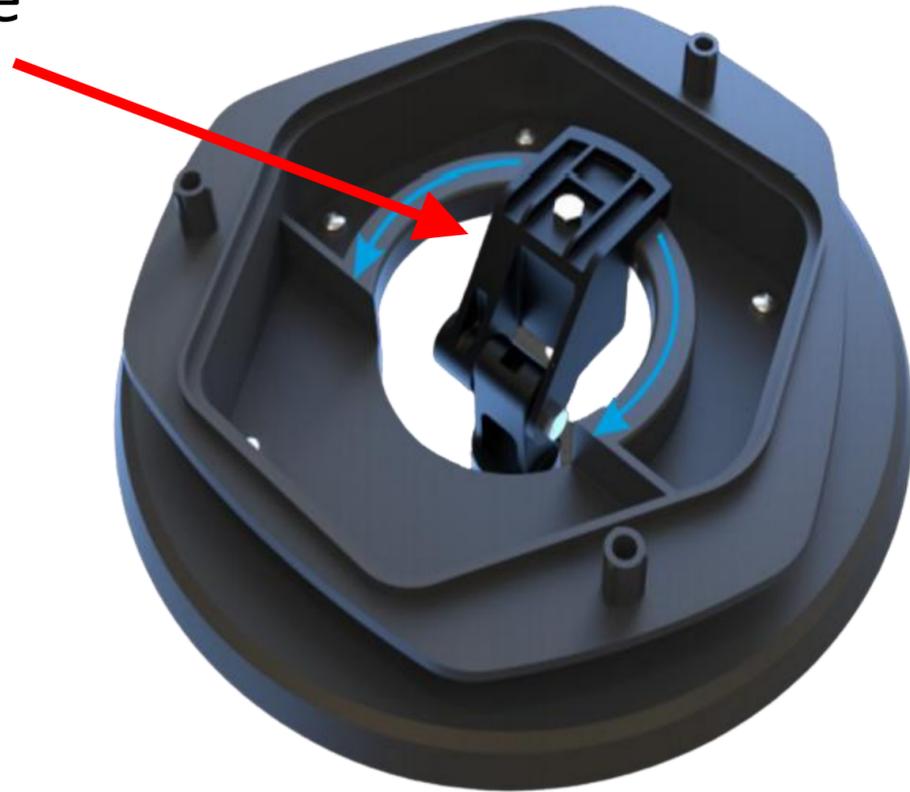


Physical Form



Directional Adjustment of Sensors

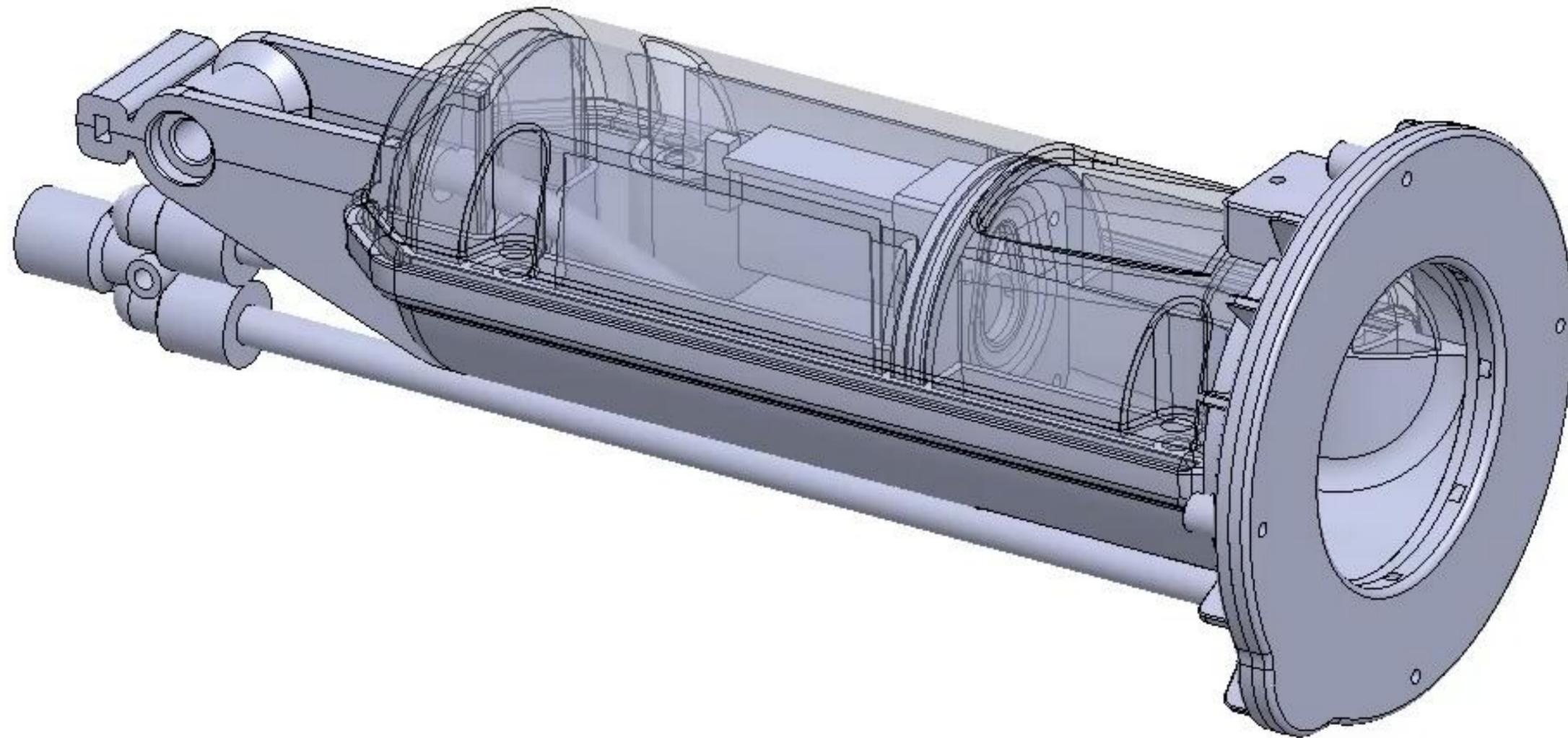
Clamp rotates
>180° to get the
exact position
needed



Sensor rotates
>180° to get the
exact position
needed



Self Cleaning Sensor



Self Cleaning Sensor



Designed to fit any Size and Shape of Silo



Solar Installation



Designed to fit any Size and Shape of Silo



Wired Installation



Mills : Features and Benefits



Features

- Wireless communications direct to cloud
- Self cleaning sensor
- Rugged construction for mill floor installation (Flexible installation options for virtually any type of silo or silo location)
- 15 minute measurement interval (max)
- Installed and online in under 1 hour with no requirements for comms cabling
- Laser sensor accuracy of $\pm 1\text{mm}$
- IP67
- Operating Temp Range -20°C to 45°C
- CE certified
- Intuitive Platform

Benefits

- Improved Safety : no more climbing the mill to manually dip bins
- Improved process control and inventory management based on continuous online level measurements
- Minimal disruption to operations during Installation, operation and servicing
- Secure data accessed anywhere via a web browser
- Programmable Low level alerts
- Programmable material density for even better tonnage accuracy



Mills : How SiloSpi Improves Safety and Process efficiency



Manual Bin Dipping

1. Climb silo stairs (*risk of falling / tripping)
2. Open hatch on each and manually gauge remaining quantity or use a handheld laser sensor (*risk of entering bin)
3. Close hatch and secure
4. Record data in notebook
5. Move to next bin and repeat for all bins
6. If external silos have no easy access ignore them
7. Return to control room and transcribe notes to PC which are now slightly out of date
8. Repeat as often as required

SiloSpi

1. Open SiloSpi platform on PC
2. Live levels data is presented in an intuitive format
3. Historical data is retained for all time
4. Live levels data available from anywhere in the plant (or the world)
5. Sensors self-clean as needed
6. Sensors are serviced by Lvlogics as needed
7. Battery back-up and wireless comms ensure sensors are always online



Designed to fit any Size and Shape of Silo

Mill Installations



Designed to fit any Size and Shape of Silo



Mill Installations



Designed to fit any Size and Shape of Silo



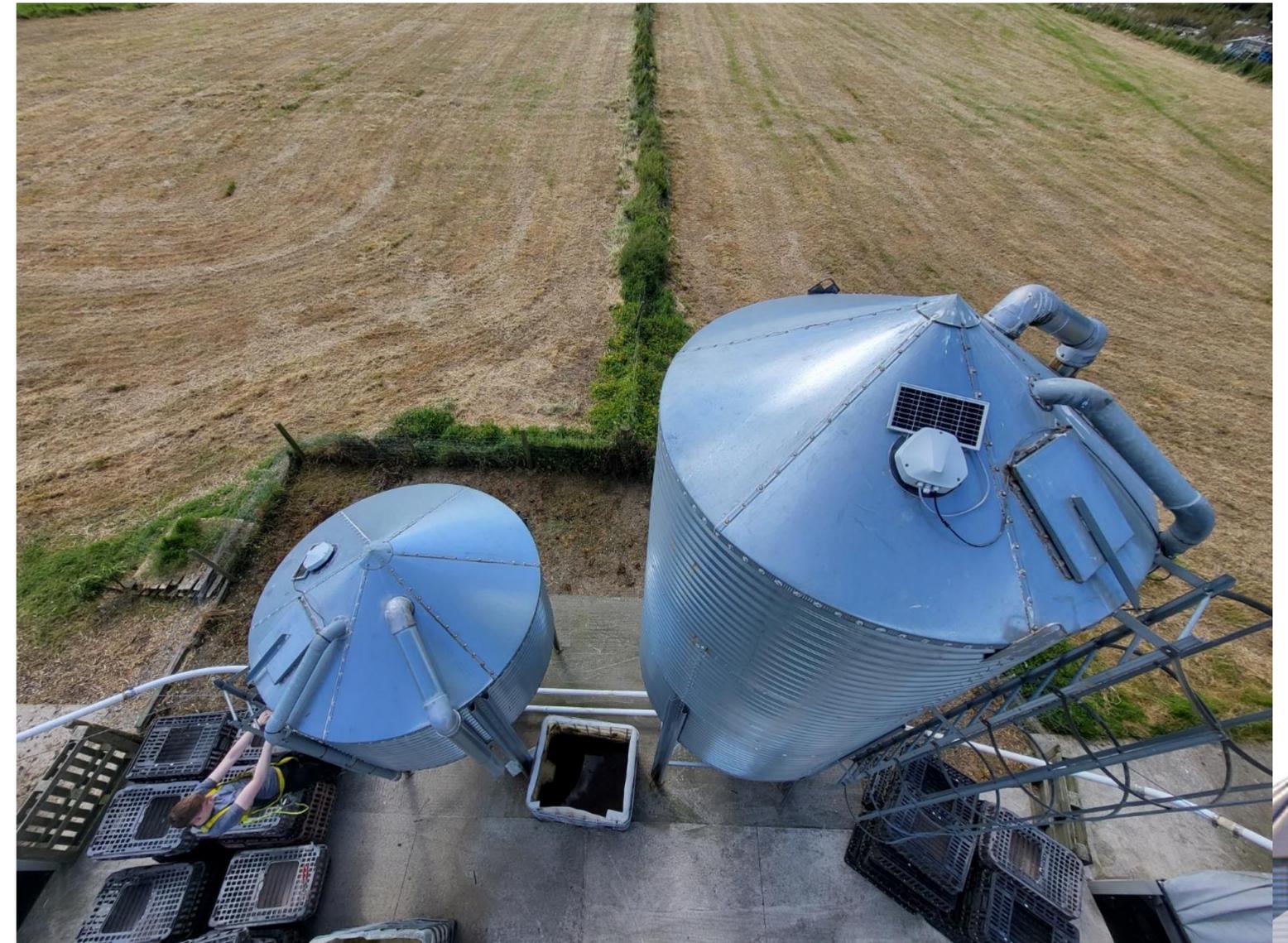
Mill Installations



Designed to fit any Size and Shape of Silo



Farm Installations



Designed to fit any Size and Shape of Silo

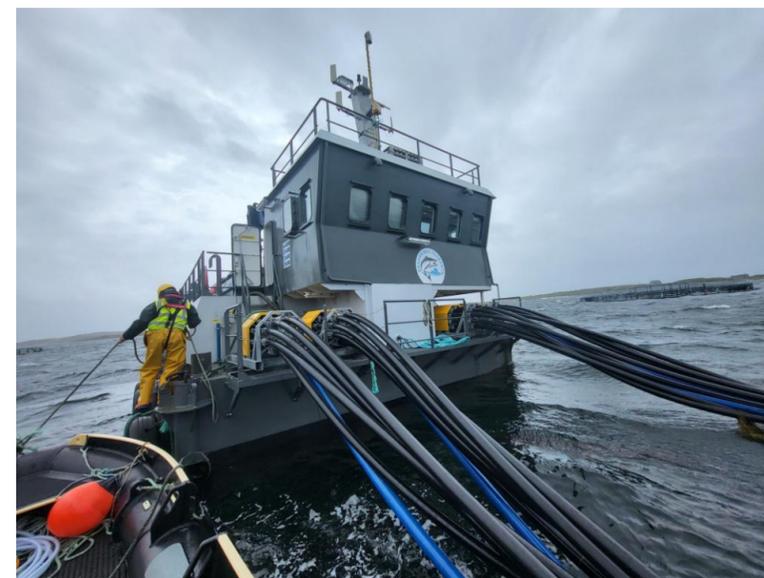
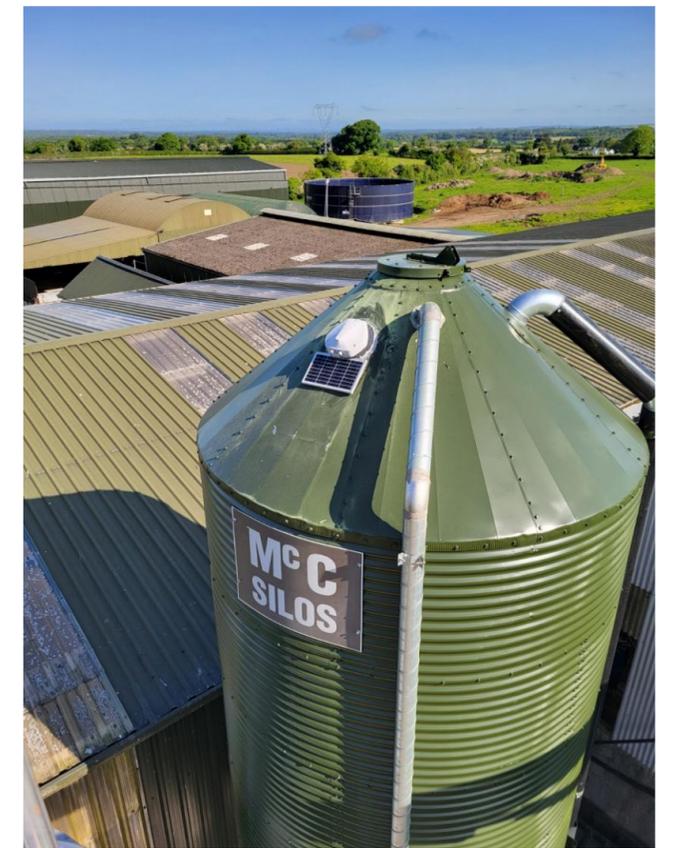


Farm Installations



Designed to fit any Size and Shape of Silo

Farm Installations



Designed to fit any Size and Shape of Silo

Industrial Installations



Designed to fit any Size and Shape of Silo



Industrial Installations



Designed to fit any Size and Shape of Silo

Industrial Installations



Designed to fit any Size and Shape of Silo

Industrial Installations



Sample of Customers



Key Features

Self-Cleaning

SiloSpi will call on compressed air only when needed to ensure its optics are always clean

Wireless

Significantly reduce installation costs by having the data transmitted wirelessly to the cloud

IT Systems not impacted

Comms is fully outside companies IT network so no impact on security

Easy to install

Installation on any type of silo or bin typically takes < 1 hour, with no requirement for comms cabling.



Product Features & Links to Demonstrations



Real time levels

You can check current levels of stock at any time.

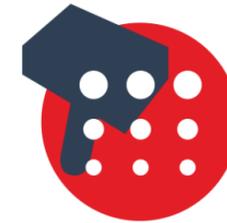
[Here](#)



Levels Graph

The record of historic levels can be viewed at any time online.

[Here](#) to view data/graph.



Self-cleaning

The world's first self-cleaning silo monitoring solution.

[Demo of self-cleaning sensor](#)

[Sensor self-clean @ 1000FPS](#)



Silo Levels Email

Email alerts at agreed thresholds.



Optional Temperature & Humidity sensor

Quality of feed solids can be monitored by having access to humidity and temperature data.



Benefits to users – Mill deploys on FARMS

Benefits for the Mill



Cost Savings

Consolidate deliveries : reduce delivery cost per tonne by lowering number of trucks on the road



Reduces Carbon Footprint

Deliver twice as much, half as often

Benefits for the Farmer



Increase Safety

Health & Safety improvement - avoid need to climb silos



Peace of Mind

Predict runout - prevent panic ordering



Awards to date

- RDS Sustainable Rural Start-Up Award Winner 2024
- Finalist in Irish Times Innovation Awards 2022
- Agri-Technology Award winner at the Enterprise Ireland Innovation Awards 2022
- AXA National Dairy Innovation Awards 2021
 - Over-all Winner
 - Best Start-up
 - Tech Award
- GLOMO – shortlisted for award 2021
- Fierce Innovation Awards - Winner IOT 2020
- Businesswire Breakthrough Awards 2021 –
 - Winner of Smart Agriculture Solution of the Year



Case Study 1

Level Monitoring at Feed Mills



CUSTOMER: Kiernan Milling Ltd

- Monitoring 84 Ton/23-meter silos with very fast throughput
- Real time stock vision (at fraction of cost of alternative methods)
- Eliminates need to climb silos for manual checks - reduces labor costs
- ERP compatible



Mark Kiernan • 1st
Chairman of Kiernan Milling
1mo •

Excellent system, We use it on all our bins.



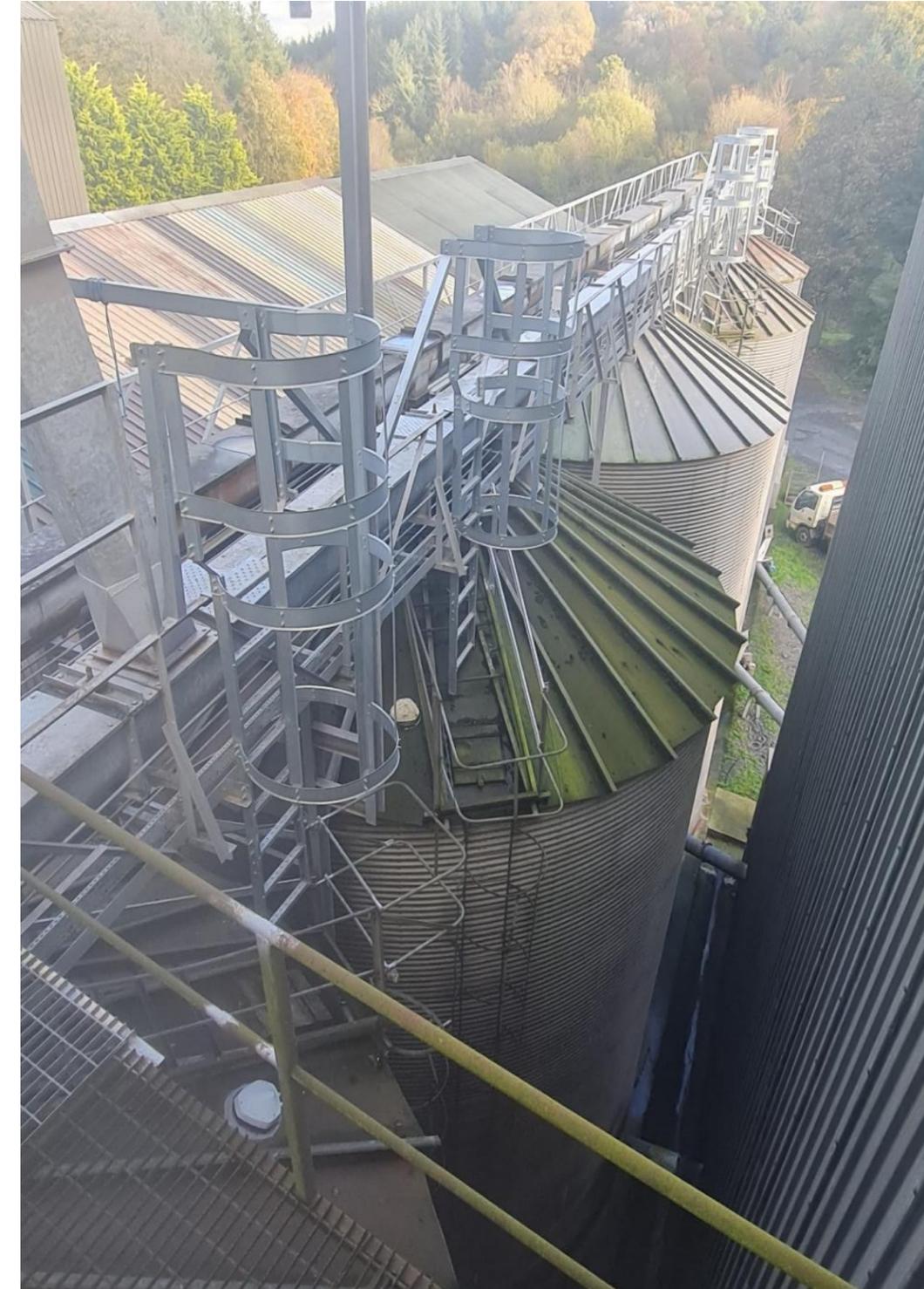
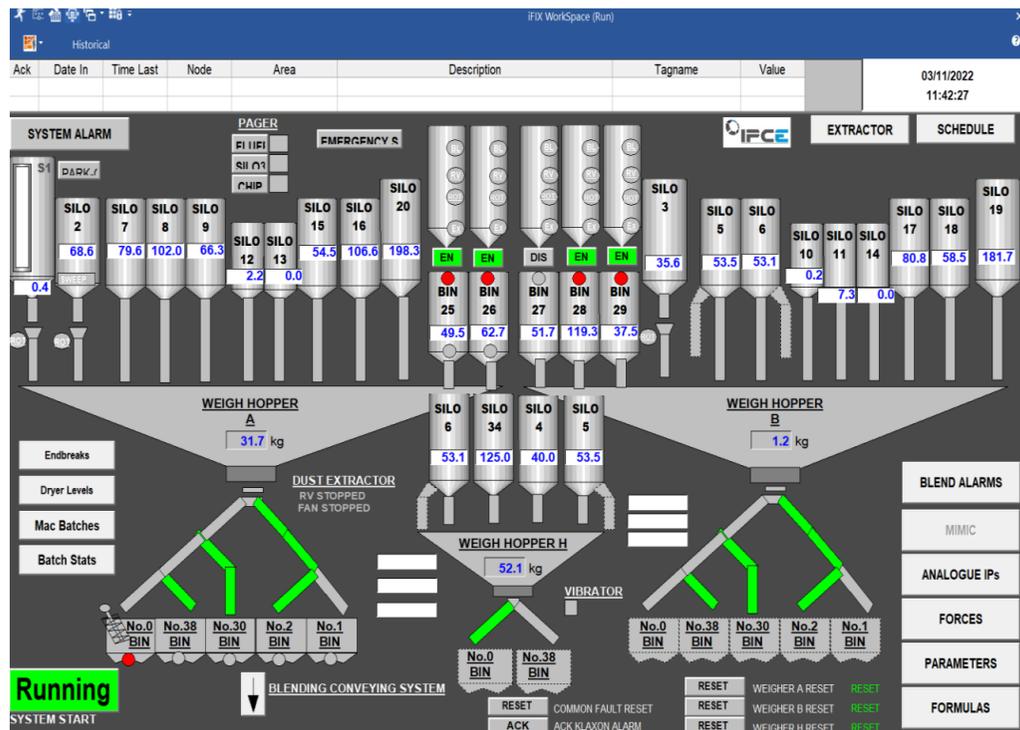
Case Study 2

Level Monitoring at Feed Mills



CUSTOMER: Manor Farm

- Monitoring 14 silos up to 225 Tonne/15meter silos with very fast throughput
- Improved Factory Efficiency
- Eliminates need to climb silos for manual checks - reduces labor costs



Case Study 3

Farm Silo Monitoring for Mill

CUSTOMER: Irish Feed Company

- Monitoring over 100 farms for one Mill
- Providing Logistics optimisation reports
- Providing alerts and levels to farmers
- Saving run outs and manual checking

