

ISOLOGIC BREATHERS

5-28-2019

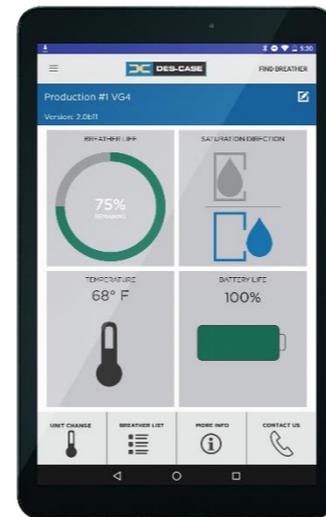
Product & Software Applications

Product & Software Applications



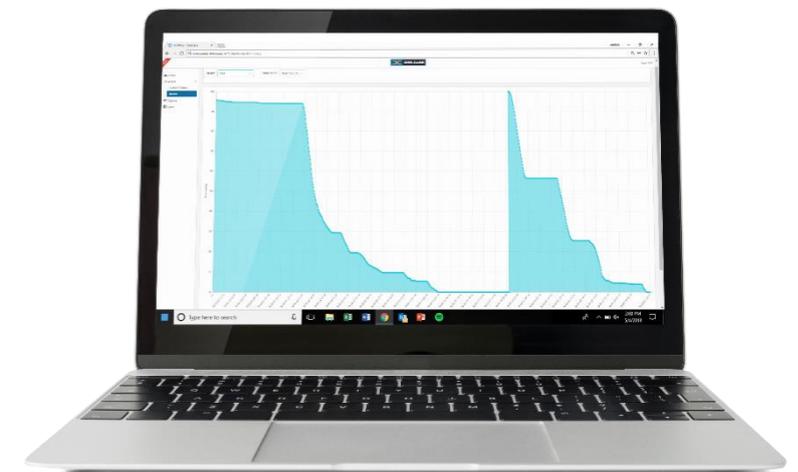
Breather (Sensor Technology)

Seal and protect the assets while value add of sensor technology



IsoLogic APP

Monitor your breather and its attributes right from your phone with mobile app



IsoLogic Platform

Monitor all your IsoLogic breathers and diagnostic trends from a simple web interface

Design & Technical Specifications

Design & Technical Specifications

BREATHERS:

VentGuards

The ideal solution to protect against moisture and particulate contamination in low-flow applications with intermittent operations.



APPLICATIONS:

- Gearboxes
- Low-Flow
- High-Humidity
- Washdown



Charts & Graphs

Materials & Components:

Filter Housing: Polypropylene, Nylon, polypropylene, Buna-N, silicone
 Filter Media: Polyurethane, polyester
 Hydrophilic Media: Silica gel

Filter Efficiency:

(By absolute, 3µm X10)

Recommended Temperature Range:

20°F to 100°F
 -20°C to 38°C

Chemical Compatibility:

Recommended:
 All Gear Oils
 Most Hydraulic Fluids
 Mineral & Synthetic Oil

Not Recommended:

Fluoroalkene Ester
 Hydrogen Sulfide
 Sulfuric Acid
 Tertiary Alkylamines

Sizing Recommendations:

Model	Max. Airflow at load	Recommended Max. Volume Gearbox/Storage Tank
DC-VG-BB	4.4cm ³ /41µm	1-gal/3.8L
DC-VG-1	1.8cm ³ /1µm	33gal/125L
DC-VG-2	2.4cm ³ /50µm	200gal/757L
DC-VG-3	2.4cm ³ /75µm	350gal/132L
DC-VG-4	2.9cm ³ /84µm	500gal/189L

Water Adsorption Capacity:

Size	Maximum Water Retention
DC-VG-BB	23ml / 0.8fl. oz.
DC-VG-1	50ml / 1.68fl. oz.
DC-VG-2	138ml / 4.1 fl. oz.
DC-VG-3	220ml / 7.4fl. oz.
DC-VG-4	352ml / 11.2 fl. oz.

Dimensions & Connections:

Model	Connection	Unit Height	Unit Width
DC-VG-BB	M12x1.5 (PT, BSP, NPT)	3.50in / 8.9cm	2.5in / 6.4cm
DC-VG-1	1/2" NPT (PT, BSP, NPT)	3.31in / 8.4cm	2.5in / 6.4cm
DC-VG-2	1" NPT (PT, BSP, NPT)	3.6in / 9.1cm	3.0in / 7.6cm
DC-VG-3	1.5" NPT (PT, BSP, NPT)	4.1in / 10.4cm	3.0in / 7.6cm
DC-VG-4	2" NPT (PT, BSP, NPT)	4.1in / 10.4cm	3.0in / 7.6cm



The Overview

Standard Breathers: Typical Industries

- Wind Energy
- Pulp & Paper
- Aviation
- Storage
- Manufacturing
- PetroChemical

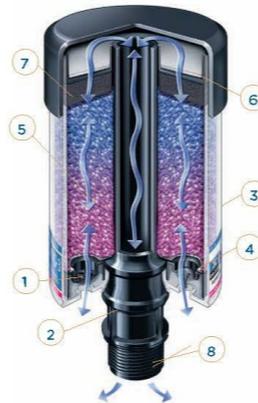
How It Works

This breather unit replaces the standard dust cap or OEM breather cap on equipment. Check valves on the bottom of the unit isolate the system until equipment needs to breathe. As air is drawn into equipment through the breather, the layered filter elements remove particulate while the desiccant beads strip harmful moisture.

While in service or during shutdown, the desiccant beads attract moisture from inside the equipment reservoir, actively drying the equipment.

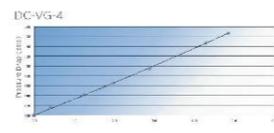
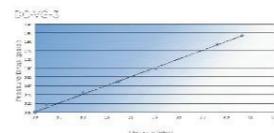
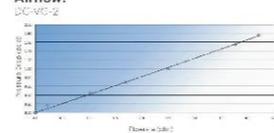
By the Numbers:

- 1-Recessed Check-Valves**
High-quality umbrella check-valves that won't clog or stick are recessed underneath the unit for added protection from washdown environments. Check-valves isolate equipment from ambient conditions, prolonging breather life.
- 2-Integrated Nylon Standpipe**
The integrated standpipe provides excellent vibration resistance and dissipates impact throughout the unit, eliminating weak points. It also allows even airflow distribution throughout the unit, eliminating inaccurate readings of desiccant saturation.
- 3-Resilient Polycarbonate Body**
Shock-absorbing, clear casing provides reliable service and easy maintenance.
- 4-Filter Element**
Polyester filter element removes airborne contamination to 3-micron absolute. Unique loops allow particles to release during system exhalation, helping to increase breather life.
- 5-Water Adsorbent**
Silica gel adsorbs water from incoming air and can hold up to 40% of its weight. Condition is indicated by change of color from blue to light pink.
- 6-Secondary Filter Element**
Second polyester filter element protects against migration of desiccant dust, providing maximum efficiency.
- 7-Foam Pad**
Foam filter captures any oil mist and disperses incoming air evenly over filtration and drying areas.
- 8-Threaded Mounting**
Easily replaces standard filter/breather cap with multi-fit connection or one of several adapters.

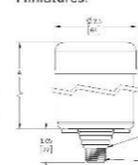


ADDITIONAL SPECS.

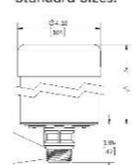
Airflow:



Miniatures:



Standard Sizes:



Breathers	A	Breathers	A
DC-VG-BB	2.52"	DC-VG-2	1.33"
DC-VG-1	2.80"	DC-VG-3	6.35"
		DC-VG-4	6.85"

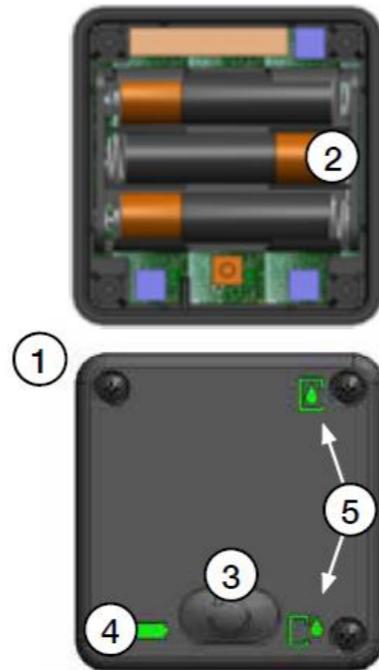
Same Trusted Des-Case Breather



Design & Technical Specifications – Module & Sensors

By the Numbers:

1. Sealed Rubber Cap
2. Three AAA Batteries
3. Push Button
4. Battery indicator LED
5. Saturation Direction LEDs



Environment:

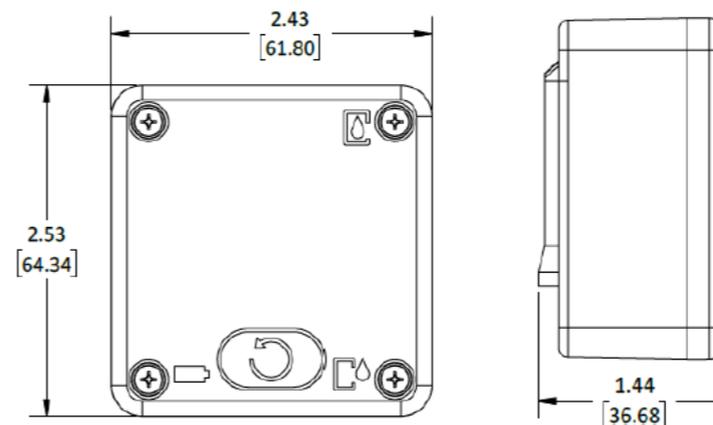
- Intended for Indoor and Outdoor Use
- Altitude up to 5,000 meters
- Temperature Range:
 - 4 degree F to 129 degree F
 - 20 degree C to 54 degree C
- Maximum Relative humidity 100% at up 54 degree C temperature
- Dustproof / Waterproof (IP66)
- Hazardous Ratings: Not rated for hazardous locations
- FCC, CE, REACH, RoHS

Materials & Components:

- Module Casing: Polycarbonate, Steel (ball plunger)
- Module Cap: Thermoplastic Elastomers (TPE), Steel (screws)
 - Circuit Board: LED lights, FR4 Fiberglass
 - Batteries: 1.5V Alkaline: AAA (Manganese Dioxide, Zinc, Potassium Hydroxide, Graphite)

Dimensions:

- 2.43in L x 2.43in W x 1.44in H
- 62mm L x 64mm W x 37mm H



Design & Technical Specifications – Module & Sensors

LED Display & Symbol Indication:

Battery Life:

Green: 100%-21%



Yellow: 20% - 11%

Red: 10% - 0%

Breather Life:

Green: 100% - 21%



Yellow: 20% - 1%



Red: 0%

Saturation Direction:

Top: Moisture From Asset Headspace



Bottom: Moisture From Ambient Air

Both: Coming From Asset Headspace & Ambient Air



Wireless Synching:

- 2402.0 - 2480.0 MHz Bluetooth 4.0 Low Energy
- 13.56 - 13.56 MHz RFID
- Communication Range: 100ft (30m) Line of Sight
- Compatible Devices:
- Devices may be used if they meet the following criteria:

Android:

Bluetooth 4.0 and higher

Android OS 5.0 and higher

Apple

iOS 10.0 and higher

(Please visit our website for compatible devices)

Battery & Power:

- Supply Source: Three AAA Battery (each rated 1.5 V d. c., Max. 1200 mAh)
- Supply Voltage: 4.5 V d.c.
- Operational Current rating: 30 mA
- Life Expectancy: 2 Years (use & temperature dependent)

Measurements:

- Calculated Breather Life
- Saturation Direction
- Temperature
- Battery Life

Data Storage:

- Data readings every 60 min
- Stores 365 days of hourly data points

Software:



Go to iTunes App Store, or Google Play to download app

iOS



Visit our website at

<https://descase.info/isologic/>

Product Installation & Start Up

Product Installation & Start Up

1.



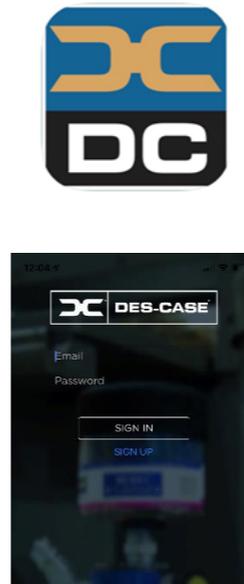
Remove Plugs & Install Breather

2.



Install Batteries & Download App

3.



Set Up User Account

4.



Breather Set Up

5.



Done

Application & Web Platform Guide

Application

Scan for Devices:

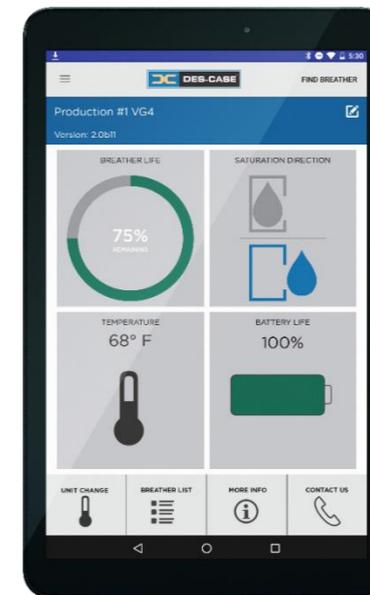
View the status of all the IsoLogic breathers in range without having to directly connect



- Breather List (In Range & Out of Range):
 - Breather Name
 - Breather Status
 - Sensor ID #
 - Last Sync Date
- Menu Bar:
 - Auto Download (On/Off)
 - Resources
 - Sign In/Out
 - App Version

Sync & Dashboard:

Simple, intuitive dashboard to track breather performance



- Find My Breather
- Name Asset
- Breather Life
- Saturation Direction
- Temperature
- Battery Life
- Breather Firmware Version
- Menu Bar:
 - Resources
 - Breather List Return

Web Platform

Platform Technical:

- Cloud Based
- Microsoft Azure Servers

Platform Layout:

- Sign Up & Login
- Dashboard
- Asset List:
 - Status
 - Trends
- Alert Settings
- Resources

Platform Use:

- Track Breather Performance
- Analyze & Diagnose Using Trend Data
- Monitor & Manage all you IsoLogic breathers in one place



Web Platform URL:

<https://descaseisologic.com/#/>

FAQ's, Trouble Shooting & Product Support

FAQ's, Trouble Shooting & Product Support

- Software (App & Platform) Trouble Shooting
- FAQ's (Breather, App & Platform)
- Hardware (Breather) Trouble Shooting
- Operation Manual
- Installation Instructions
- Technical Sheet
- Software App & Platform Guide
- Support Structure
- Terms & Conditions
- 1 Year Warranty



Country Certifications

Country Compliance

America's:

Canada, United States

EMEA:

Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK

Asia:



Features & Benefits

Features & Benefits (Value Proposition)

Improved Performance (Scientific & Accuracy):

- Up to 20% More Life (Temperature dependent)
- Better Accuracy of when breather needs changed to still protect asset

Early Detection:

- Proactive approach to water ingress

Solve Problems:

- Use trend data to analyze & solve lubrication contamination issues

Save Time (Efficiency/Productivity):

- Connectivity decreases time to check breathers (Less Steps)

Stay Safe:

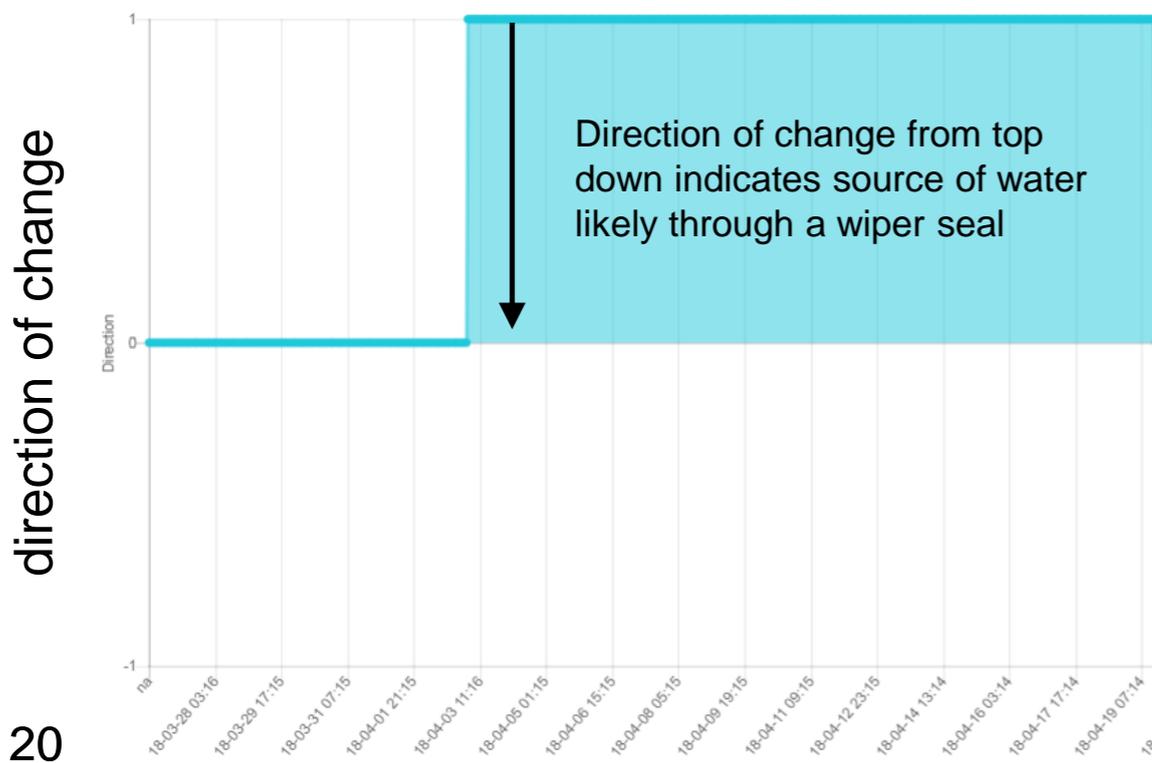
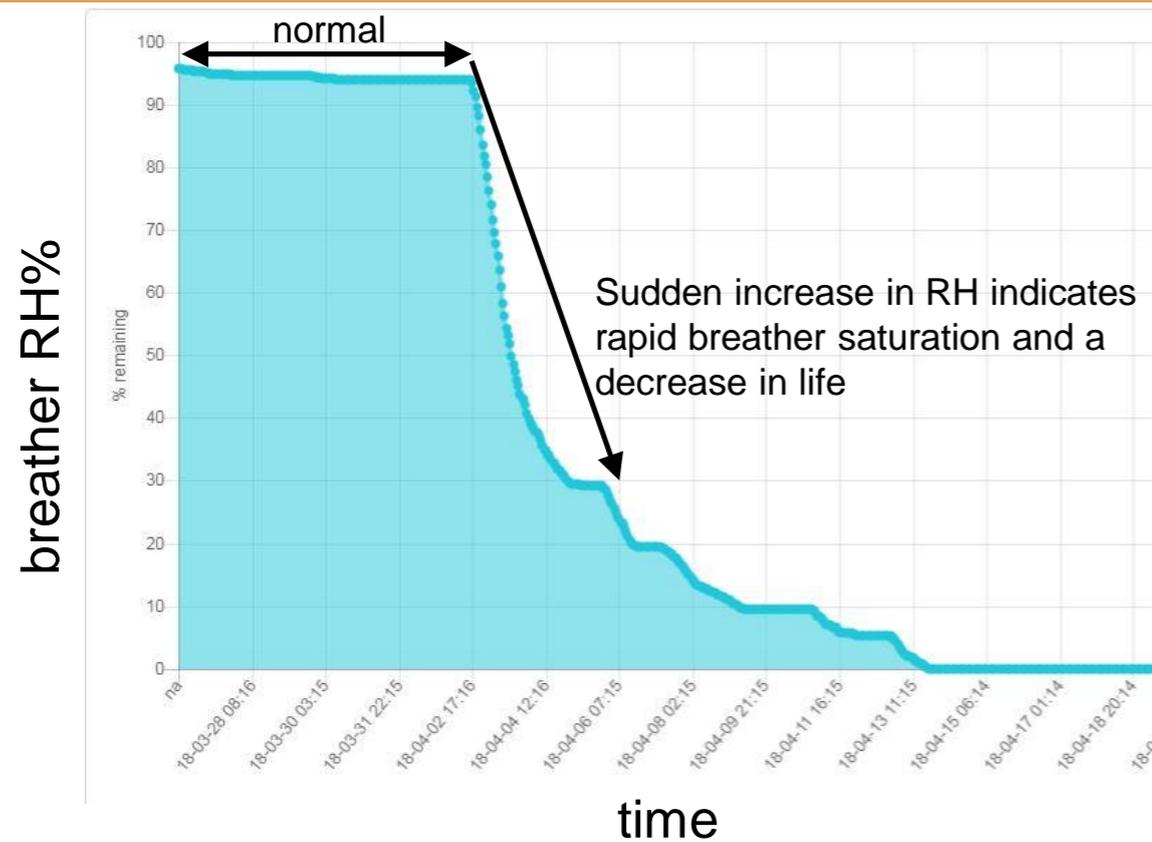
- Ability to avoid:
Hazardous Areas
Fall Concerns/Dark Areas/Hard To Reach Areas

Easy to Use:

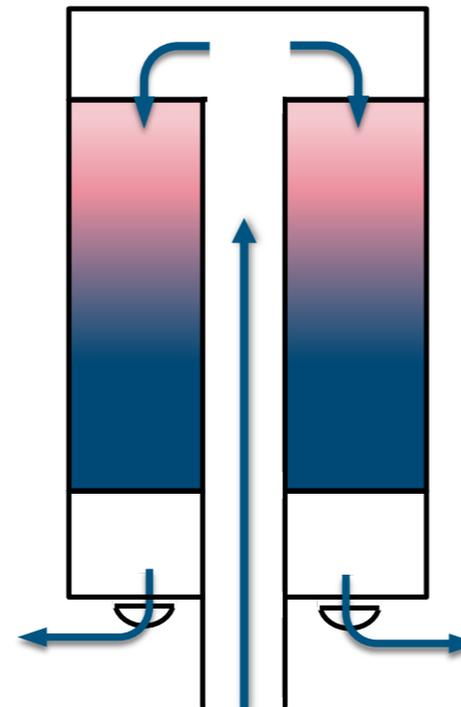
- Simple Dashboards

Case Studies

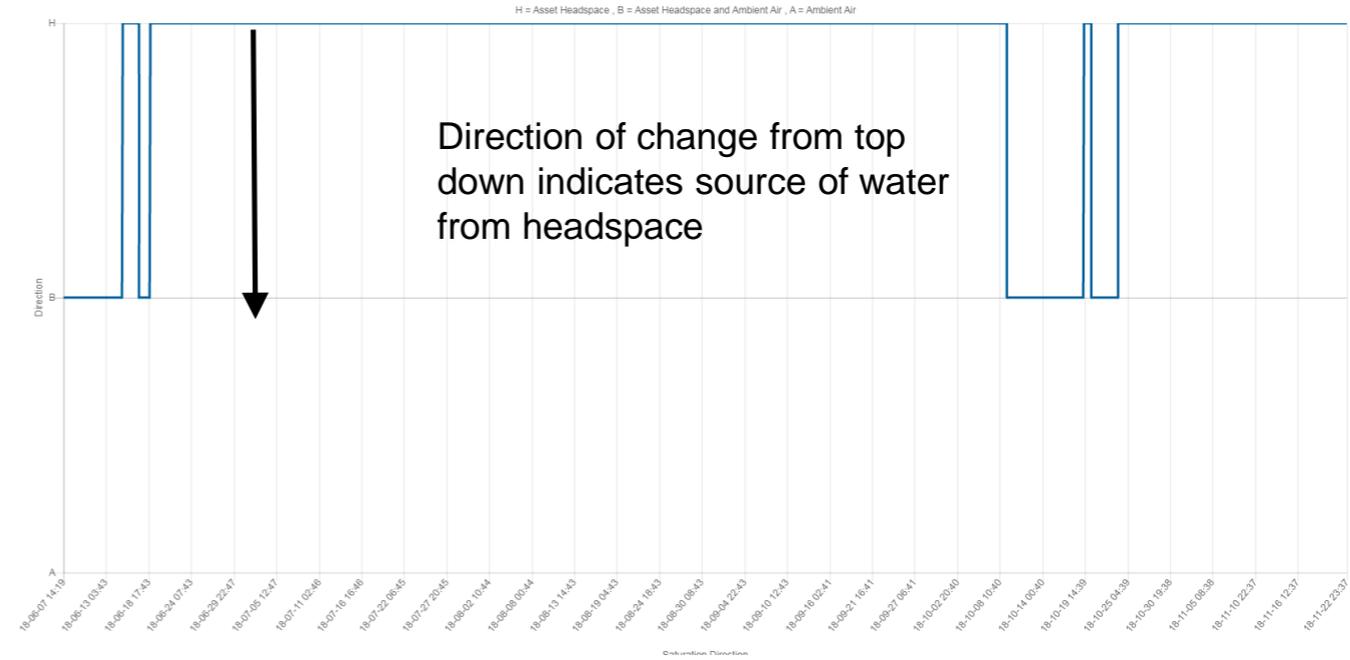
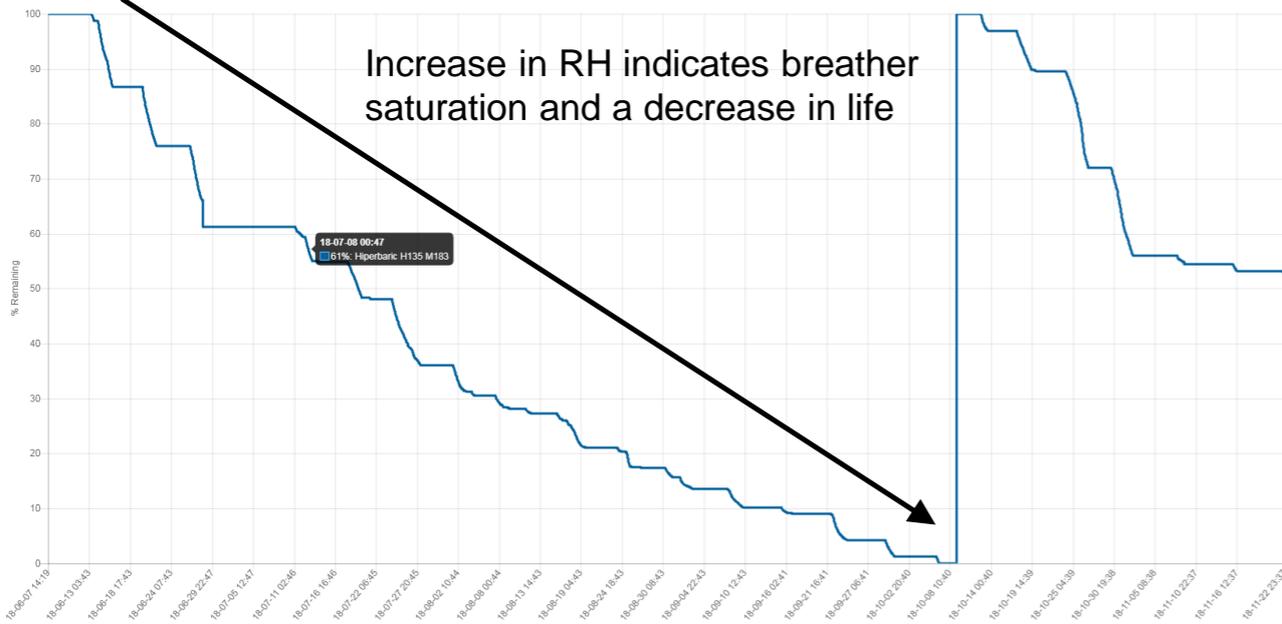
IsoLogic™ Field Testing Case Study



- Breather installed Feb 2018 on critical hydraulic system
- “Normal” performance for first month showing low RH% in headspace
- Sudden increase in RH% plus direction of change (top down) indicates water ingress
- Customer reported “operations team steam cleaned system”, forcing water through a seal
- Without IsoLogic™, problem may have gone undetected until next schedule oil sample



IsoLogic™ Field Testing – Hydraulic (Food & Beverage)



Asset: Hiperbaric H135 M183 Last Sync: 18-11-23 13:07

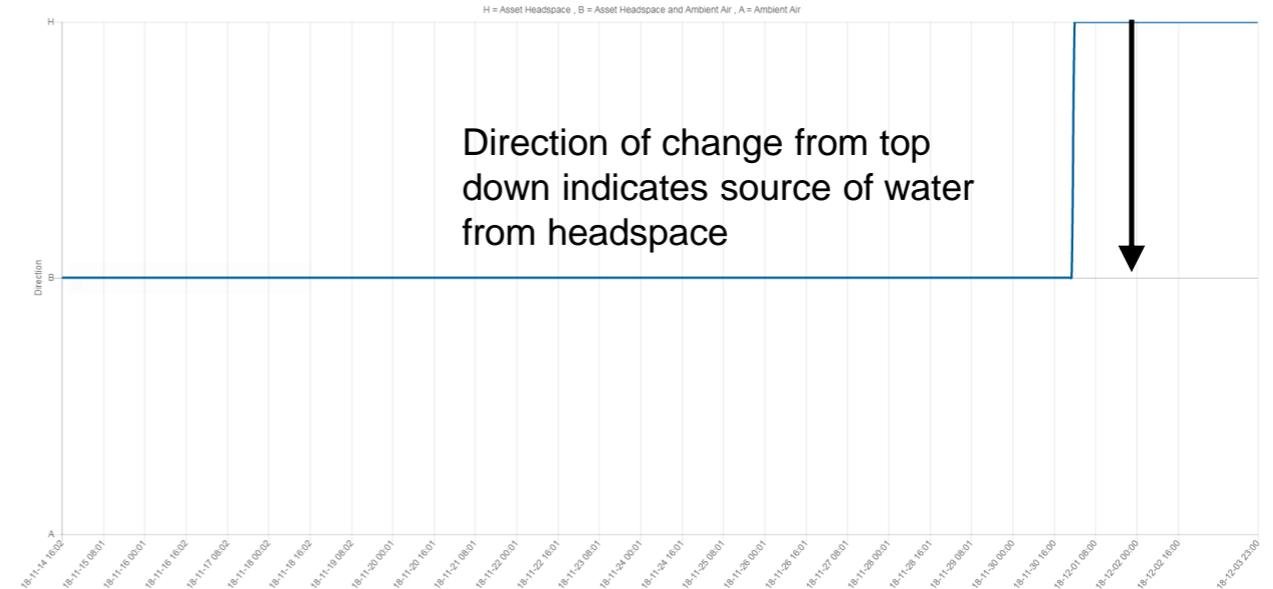
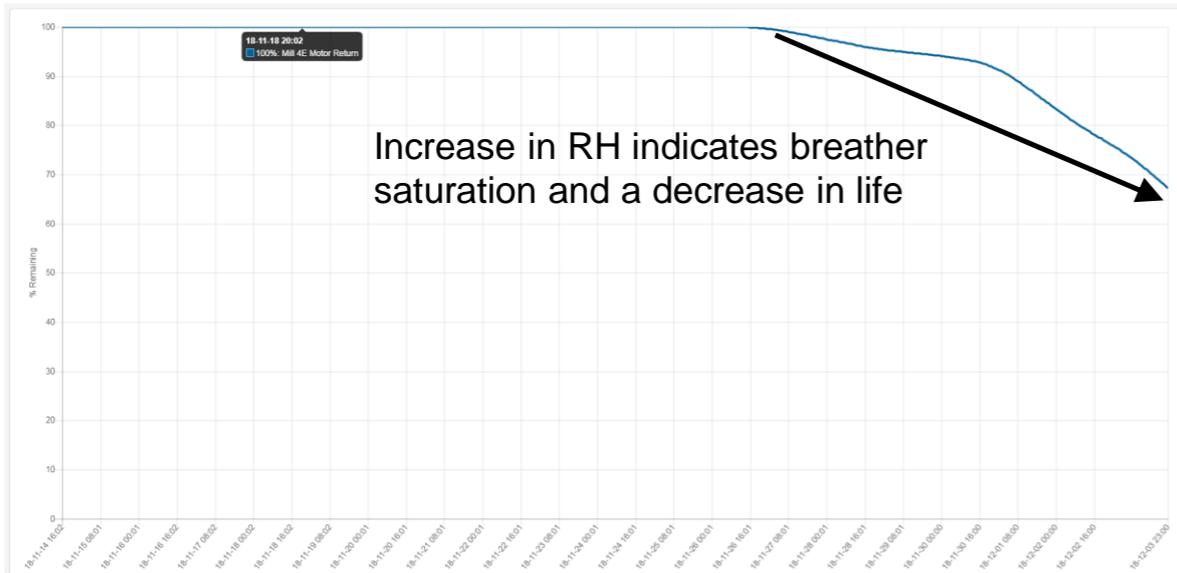
Breather Life
52% Remaining

Saturation Direction
Asset Headspace

Temperature
F: 71°

Battery Life
100% Remaining

IsoLogic™ Field Testing – (Mining)



Asset: Mill 4E Motor Return Last Sync: 18-12-04 09:07

Breather Life
64% Remaining

Saturation Direction
Asset Headspace

Temperature
F: 69°

Battery Life
100% Remaining

What's next?

Coming Soon

- RS-485 wired breather with CANBUS/MODBUS
- Gateway with Bluetooth receive capability and Cellular transmit as well as RS-485



For more information:

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