

# PRODUCT GUIDE

Instrumentation for compressed air and gas systems



Cloud-based monitoring

Leak Detection

Dew Point Sensors

Flow Meters

and more ....



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# About Us

## About Compressed Air Alliance & Nordic Filtration

Nordic Filtration are distributors of measuring equipment from Compressed Air Alliance, a producer of high quality products for more than 20 years.

Together, we provide a full range of products to measure and monitor site utilities including sensors for:

- Electricity
- Water
- Natural gas
- Compressed air
- Steam
- Liquids
- Industrial gases
- Temperature
- Flow
- Pressure

## Product Features

Our products are suitable for all industrial applications. Our sensors are:

- Accurate
- High quality
- Reliable
- Interconnectable
- Suitable for temporary or permanent applications

Our sensors can be daisy chained together and connected to a local display, our cloud-based monitoring program (GEMS) or your SCADA.

## Our Differences

As a producer, Compressed Air Alliance uses the products they sell. As a result, we have real world knowledge and experience of how our products perform. This gives our customers peace of mind and security that their new measuring equipment is thoroughly tested and ready for use.

The product range is backed up with over a decade of experience working directly with industrial systems and utilities. Compressed Air Alliance are leaders in leakage surveys, system audits, training, monitoring, measurement, repairs and system upgrades. That makes them a great partner for Nordic Filtrations measuring program.

## More Information

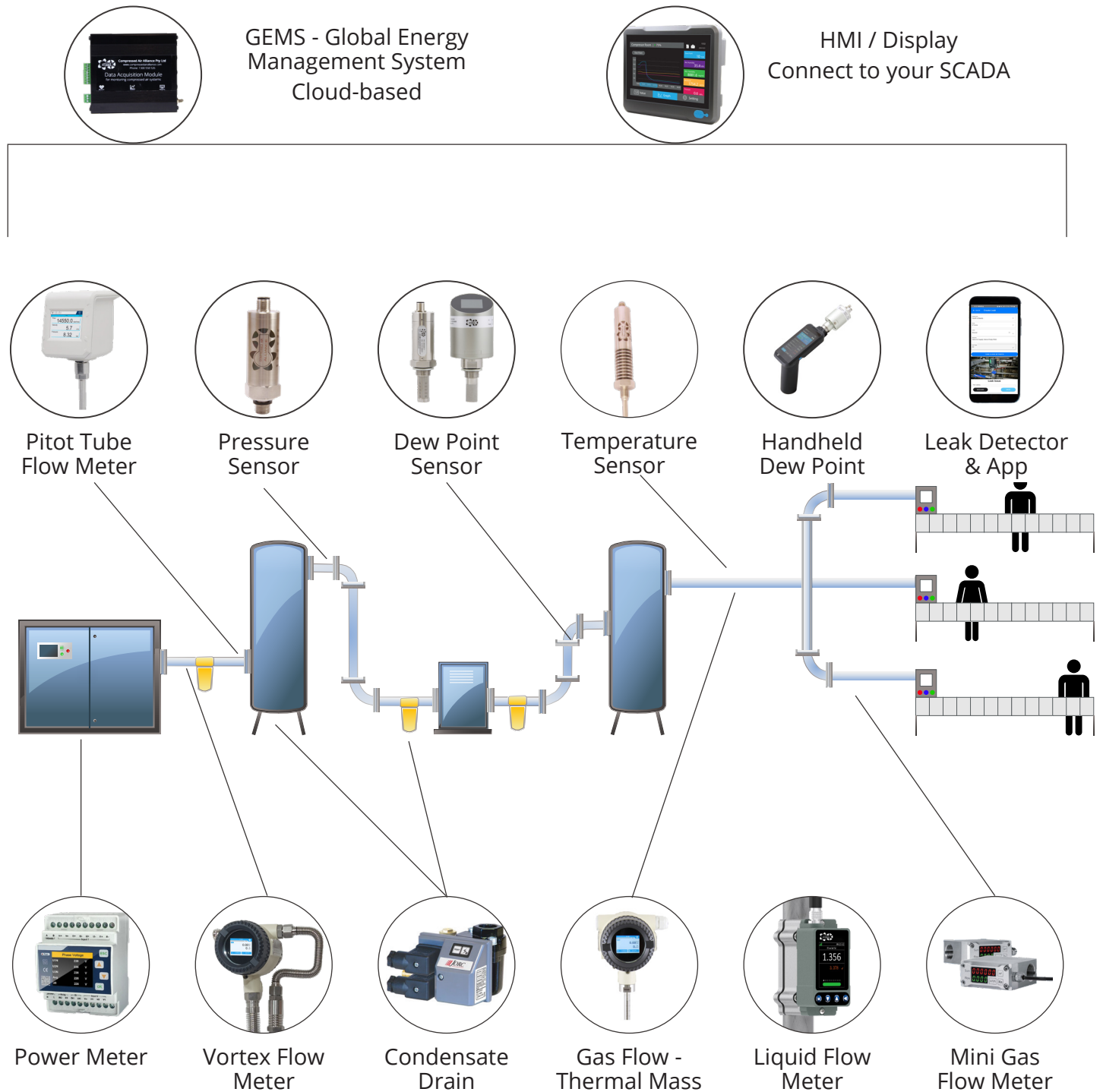
For more information on Nordic Filtration, CAA and our products or services:

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- E-mail us at [info@nordicfiltration.com](mailto:info@nordicfiltration.com)
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# Where to Install

The diagram below shows where our sensors & equipment can be installed



# GEMS - Global Energy Management System

Remotely monitor and measure your site utilities



The Global Energy Management System (GEMS) is our cloud-based approach for measuring and monitoring all your utilities including: compressed air, gas, steam, electricity and water usage.

## Key Features

- Robust industrial design for industry and manufacturing
- Easy to install and set up
- Data available in real time, 24 hours per day, 7 days per week
- Access data on your computer or phone via an internet connection
- High data frequency and endless logging capacity
- Set alarms with SMS and/or email notifications
- Set service schedules and notifications
- Document system schematics
- Receive monthly reports
- Track performance against targets
- Energy management tools – Specific power, M/T, analysis
- Secure internet connection between device and web application
- Download data in CSV format
- Remote software upgrade capability
- LTE cellular modem or LAN connection

## Data Module

- Connect up to 20 Modbus devices to one Data Module
- Connect unlimited Data Modules to your cloud platform
- Suitable for temporary and permanent monitoring
- Power requirement = 24vDC

## What do you need to get started?

- 1 or more Data Modules (one-off purchase)
- 1 or more sensors (eg flow meter, dew point sensor, power meter)
- Annual Subscription to the cloud based platform

# HMI / Displays

View and log data from multiple sensors

## HMI / Display and Data Logger for multiple sensors

Connect and view data from multiple sensors



### Display

7" IPS touch LCD, 1280 × 800 resolution

### Inputs

- 2 × RS485 inputs, up to 255 Modbus registers
- 4 × channels:
  - 0-20mA / 4-20mA / 0-1VDC / 0-10VDC
- Wi-SUN wireless communication

### Outputs

- Modbus RTU (RS485)
- Modbus TCP (Ethernet)
- USB Type-C

### Power

24 - 30 vDC

### Suitable for

- All Compressed Air Alliance sensors
- Third party sensors with Modbus RTU

### Mounting

- Wall Mount
- Panel Mount

### Alarm

2 x alarm relays

### Data Logging

Up to 2,000,000,000 values

More than 1 year of 1 second data for 60 channels

## HMI / Display for a single sensor

For use with Compressed Air Alliance Flow Meters and Dew Point Sensors



### Display

4.3" TFT LCD, 480 × 272 resolution

### Inputs

Digital - RS485 input

### Outputs

Digital - RS485 input

### Power

85 - 264 VAC

Plug into a wall socket or hard wire

### Suitable for

- Compressed Air Alliance sensors

### Mounting

- Wall Mount

Alarm

Optional

### Data Logging

No



# Dew Point Sensors

Measure pressure dew point (PDP), ambient dew point, relative humidity, temperature and pressure.



## Desiccant / Membrane Dryers & Nitrogen Systems

PDP Range: -110 to +20°C | -166 to +68°F



### Pressure Dew Point Range Options

- -110°C to +20°C (-166°F to +68°F) or
- -80°C to +20°C (-112°F to +68°F)

### Gas Contamination

Minimal contamination

### Power

10 - 30 vDC

### Operating Pressure

Up to 50 bar (725 psi)

### Outputs

Modbus & 4-20mA

### Accuracy

Up to ±2%

### Options

- Display
- Integrated pressure sensor
- Data cable with M12 connector

## Membrane, Drum, Refrigerant & Hybrid Dryers

PDP Range: -60 to +60°C | -76 to +140°F



### Pressure Dew Point Range

- -60°C to +60°C (-76°F to +140°F)

### Gas Contamination

Some contamination

### Power

10 - 30 vDC

### Operating Pressure

Up to 50 bar (725 psi)

### Outputs

Modbus & 4-20mA

### Accuracy

±2%

### Options

- Display
- Integrated pressure sensor
- Data cable with M12 connector

## Membrane, Drum & Refrigerant Dryers

PDP Range: -60 to +60°C | -76 to +140°F. Compact sensor



### Pressure Dew Point Range

- -60°C to +60°C (-76°F to +140°F)

### Gas Contamination

Some contamination

### Power

10 - 30 vDC

### Operating Pressure

Up to 50 bar (725 psi)

### Outputs

Modbus & 4-20mA

### Accuracy

±2%

### Options

- Stainless Steel Casing or
- Aluminium Casing

## High Purity Gases operating below -80°C (-112°F)

PDP Range: -120 to +20°C | -184 to +68°F



### Pressure Dew Point Range

- -120°C to +20°C (-184°F to +68°F)

### Gas Contamination

Minimal to no contamination

### Power

10 - 30 vDC

### Operating Pressure

Up to 17 bar (246 psi)

### Outputs

Modbus & 4-20mA

### Accuracy

Up to ±2%

### Options

- Data cable with M12 connector

## Outdoor Sensor - IP67 rating and Display

PDP Range: -110 to +60°C | -166 to +140°F. Outdoor or harsh environments



### Pressure Dew Point (PDP) Range Options

- -110°C to +20°C (-166°F to +68°F) or
- -60°C to +60°C (-76°F to +140°F)

### Gas Contamination

Minimal contamination

### Power

16 - 30 vDC

### Operating Pressure

Up to 50 bar (725 psi)

### Outputs

Modbus & 4-20mA

### Accuracy

Up to ±2%

### Options

- Integrated pressure sensor

## Hand-held, Portable Dew Point Meter

Ideal for temporary measurements



### Pressure Dew Point (PDP) Range Options

- -110°C to +60°C (-166°F to +140°F) or
- -60°C to +60°C (-76°F to +140°F)

### Gas Contamination

Minimal contamination

### Power

Rechargeable lithium battery

### Operating Pressure

Up to 17 bar (246 psi)

### Outputs

USB

### Accuracy

Up to ±2%

### Included

Measurement Chamber, teflon tube, charger, quick connect, data logger

### Data Logger

200 million recording points

## Wall Mount with Alarm and Large Display

Ideal for situations that need a large display and audio-visual alarm



### Pressure Dew Point (PDP) Range Options

- -110°C to +20°C (-166°F to +68°F) or
- -80°C to +20°C (-112°F to +68°F) or
- -60°C to +60°C (-76°F to +140°F)

### Power

110 - 240 vAC

### Operating Pressure

Up to 17 bar (246 psi)

### Outputs

- 4-20mA output
- Alarm relay

### Accuracy

Up to ±2%

### Included

Power cable, teflon tube, alarm light & siren

### Options

- Integrated pressure sensor



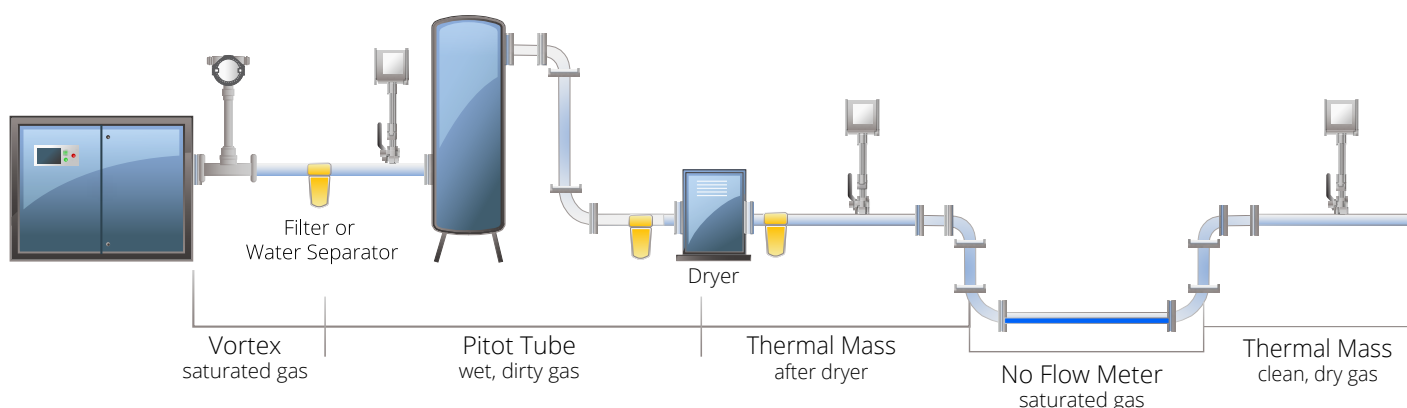
# Flow Meters - Gas

Gas and steam meters

Measure flow, consumption and temperature



## Flow Meter Locations



## Vortex Flow Meter (Gas and Steam)

Install on compressor outlets, steam systems or dirty gases



### Gas Quality

Saturated, wet and dirty gas, Steam

### Power

18 - 30 vDC

### Operating Pressure

Up to 63 bar (913 psi)

### Gas Flow Range

1.5 - 300 Nm (5 - 984 ft/sec)

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Inline style (Flange or R-Thread): DN15 to DN300

### Accuracy

$\pm(1.5\% \text{ RD} + 0.3\% \text{ FS})$

## Pitot Tube (Gas)

Ideal for damp or lightly contaminated gas. Install before a dryer



### Gas Quality

Wet and dirty gas (non-condensing)

### Power

18 - 30 vDC

### Operating Pressure

Up to 17 bar (246 psi)

### Gas Flow Range

5 - 300 Nm (17 - 984 ft/sec)

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Insertion style: DN25 to DN600

### Accuracy

$\pm(1.5\% \text{ RD} + 0.3\% \text{ FS})$

### Bi-directional

Optional

## Mini Flow Meter (Gas)

Ideal for point of use monitoring. Install in dry gas



### Gas Quality

Dry, clean gas

### Power

24 vDC

### Operating Pressure

Up to 16 bar (232 psi)

### Gas Flow Range

0.1 - 250 Nm (0.3 - 820 ft/sec)

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Inline style: DN3 to DN40

### Accuracy

$\pm(1.5\% \text{ RD} + 0.3\% \text{ FS})$

## Thermal Mass (Gas)

For dry, clean gas. Install in clean, dry gas (eg after a dryer)



### Gas Quality

Dry, clean gas

### Power

18 - 30 vDC

### Operating Pressure

Up to 50 bar (725 psi)

### Gas Flow Range

0.1 - 250 Nm (0.3 - 820 ft/sec)

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Insertion style: DN25 to DN600

Inline style (Flange or R-Thread): DN15 to DN80

### Accuracy

$\pm(1.5\% \text{ RD} + 0.3\% \text{ FS})$

## Outdoor Thermal Mass (Gas) - Insertion Style

Ideal for outdoor or harsh environments. Install in clean gas. IP67 rating



### Gas Quality

Dry, clean gas

### Power

18 - 30 vDC

### Operating Pressure

Up to 50 bar (725 psi)

### Gas Flow Range

0.1 - 250 Nm (0.3 - 820 ft/sec)

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Insertion style: DN20 to DN300

### Accuracy

$\pm(1.5\% \text{ RD} + 0.3\% \text{ FS})$

## Outdoor Thermal Mass (Gas) - Inline Style

Ideal for outdoor or harsh environments. Install in clean gas. IP67 rating



### Gas Quality

Dry, clean gas

### Power

18 - 30 vDC

### Operating Pressure

Up to 50 bar (725 psi)

### Gas Flow Range

0.1 - 250 Nm (0.3 - 820 ft/sec)

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Inline style (Flange or R-Thread): DN15 to DN80

### Accuracy

$\pm(1.5\% \text{ RD} + 0.3\% \text{ FS})$

# Flow Meters - Liquids

Industrial water, domestic water and non-aggressive liquids  
Measure flow and consumption



## Electromagnetic Flow Meter

Electromagnetic flow meter for industrial water and non-aggressive liquids



### Liquid Quality

- Electrically conductive, non-corrosive liquids
- Industrial and domestic water
- Sea and salt water
- Sewage, sludge

### Minimum Flow

0.5m/s

### Power

24 vDC

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Inline style (Flange): DN15 to DN150

### Accuracy

±0.5%

### Operating Pressure

Up to 16 bar (232 psi)

## Clamp on Ultrasonic Flow Meter

Clamp on unit with display. For small pipes



### Liquid Quality

- Clean liquids with minimal bubbles or solids
- Industrial and domestic water
- Sea and salt water

### Minimum Flow

0.1m/s (0.328 ft/s)

### Power

24 vDC

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Clamp-on: DN6 to DN100

### Accuracy

±2%

## Ultrasonic Flow Meter

Wall mount display with clamp-on transducers. For larger pipes



### Liquid Quality

- Clean liquids with minimal bubbles or solids
- Industrial and domestic water
- Sea and salt water

### Minimum Flow

0.1m/s (0.328 ft/s)

### Power

24 vDC

### Outputs

Modbus & 4-20mA

### Connection and Pipe Size

Clamp-on: DN25 to DN5000

### Accuracy

±0.5%

# Power Meters

Measure amps (A), voltage (V), kilowatts (kW), kilowatt hours (kWh), power factor (PF) and more

## 3 Phase Power Meter - Din Rail mounting

Monitor your mains power supply, sub loads or individual equipment



### Inputs

- Input voltage up to 600 vAC
- Input current up to 9,999 Amps

### Features

Three phase or single phase measurement  
Display  
Alarm relay

### Power

24 vDC

### Outputs

Modbus RTU (RS485)  
Over 220 channels available

### Accuracy

±0.5%

### Rogowski Coils included. Choose from:

- 500 amps
- 1,000 amps
- 3,000 amps

## 3 Phase Power Meter - Panel Mount

Monitor your mains power supply, sub loads or individual equipment



### Inputs

- Input voltage up to 600 vAC
- Input current up to 9,999 Amps

### Features

Three phase or single phase measurement  
Display  
Alarm relay

### Power

18 - 36 vDC

### Outputs

Modbus RTU (RS485)  
Over 220 channels available

### Accuracy

±0.5%

### Rogowski Coils included. Choose from:

- 500 amps
- 1,000 amps
- 3,000 amps

## Rogowski Coil with Modbus or 4-20mA Output

Single phase - Amps (Current) only



### Inputs

- Input voltage up to 600 vAC
- Input current up to 9,999 Amps

### Features

Single phase - measure Amps (A)  
Perfect for temporary measurement

### Power

24 vDC

### Outputs

Modbus RTU (RS485) OR 4-20mA

### Accuracy

±0.5%

### Rogowski Coil Options

- 500 amps
- 1,000 amps
- 3,000 amps

# Pressure & Temperature

Pressure sensors for wet and dry gas

Temperature sensors for gases, liquids, ambient air



## Pressure Sensors for Gas and Non-Aggressive Liquids

Pressure Range: 16 bar (232 psi) or 50 bar (725 psi)



### Pressure Range Options

- 0 to 16 bar (232 psi)
- 0 to 50 bar (725 psi)

### IP Rating

IP65

### Power

24 vDC

### Outputs

- 0 to 16 bar sensor has Modbus & 4-20mA
- 0 to 50 bar sensor has 4-20mA only

### Accuracy

±1%

### Options

- Data cable with M12 connector

## Temperature Sensors for Gas, Liquid and Air

Measurement Range: -50 to +200°C | -58 to +392°F



### Pressure Range

- -50°C to +200°C
- -58°F to +392°F

### IP Rating

IP65

### Power

24 vDC

### Outputs

Modbus RTU (RS485) OR 4-20mA

### Accuracy

±0.5% FS

### Options

- Data cable with M12 connector

# Leak Detection

Find and record leaks in compressed air, gas and steam systems



## Ultrasonic Leak Detector

Find leaks in compressed air, gas and steam systems



### Description

- Basic Ultrasonic Leak Detector
- Simple to use, no screen to distract you

### Power

- 1 x 9v Alkaline Battery
- Up to 10 days operation on one battery

### Handset weight

0.3 kg (11 oz)

### Includes

Handset, headphones, focusing probes and carry case

## Visual and Ultrasonic Leak Detector

Find leaks in compressed air, gas and steam systems



### Description

- Visual Leak Detector
- Detect leaks up to 120 meters away

### Power

- 1 x 6600mAh@7.2V Rechargeable Battery
- Up to 6 hours operation on one charge

### Handset weight

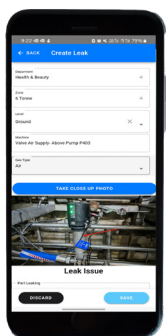
1.7 kg (60 oz)

### Includes

Handheld device

## Leak Survey App

Record leaks and parts. Download reports



### Simple to use

- Record leaks, inappropriate use and other opportunities
- Take photos
- Record parts required to fix leaks
- Quantify leak costs (cost and flow rate)
- Create customised reports
- Download reports
- Download parts lists

### Leak App

- Android and iOS phones
- Use with any leak detector





## Product Warranty

Compressed Air Alliance & Nordic Filtration provides a 1 year warranty for all products listed in this catalogue. For more information, refer to our website: [www.nordicfiltration.com](http://www.nordicfiltration.com)

## Recalibration

Sensors should be calibrated regularly. We offer a recalibration service. For more information, refer to our website: [www.nordicfiltration.com](http://www.nordicfiltration.com) or contact us directly via mail or phone.

## Interested in CAA products?

Please contact Nordic Filtration if you are interested in the Compressed Air Alliance measuring products. We will gladly make an introduction for you.

## More Information

For more information on Nordic Filtration and our products or services:

- Visit our website [www.nordicfiltration.com](http://www.nordicfiltration.com)
- E-mail us at [info@nordicfiltration.com](mailto:info@nordicfiltration.com)
- Call us: +45 72 25 10 00

# How to Order



Order Online

Contact us:

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