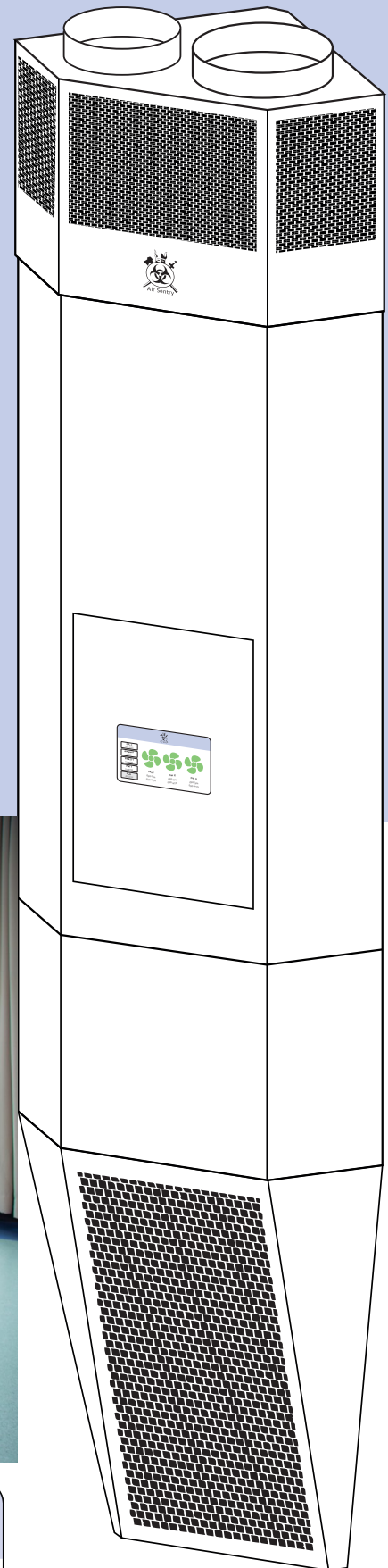




GENESIS[®] & ARISTOTLE[®]

Life Support for Buildings



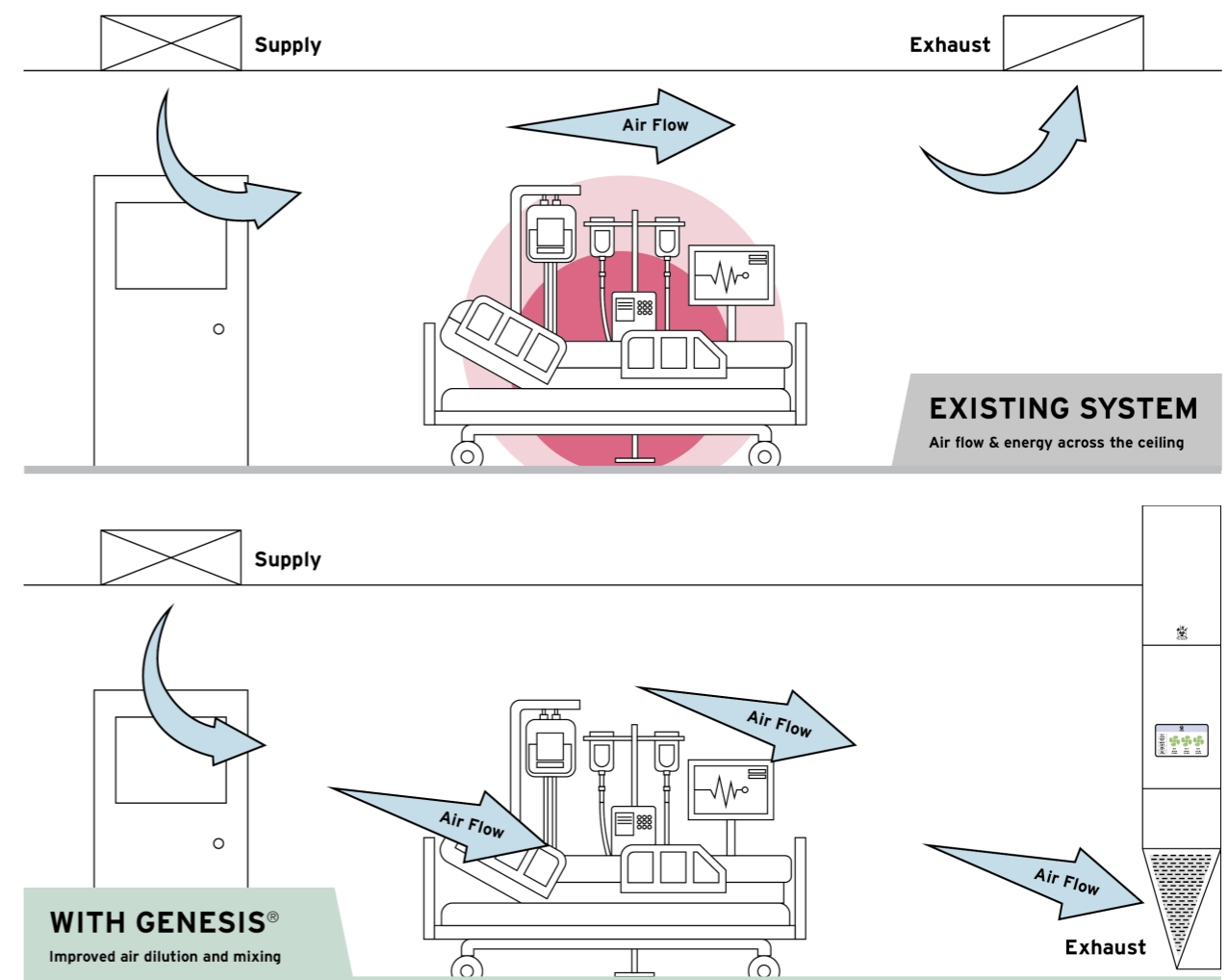
AIRSENTRY.CO.UK

| | | | |
|-------------------------------------|--|--|--|
| CO₂ 412 ppm | | | |
| Ambient 20°C | | | |
| PM2.5 6 µg/m ³ | | | |
| PM1 6 µg/m ³ | Fan 1 250 rpm 200 m ³ /h | Fan 2 600 rpm 240 m ³ /h | Fan 3 500 rpm 200 m ³ /h |
| N₂O 45 PPM | | | |



GENESIS®

In its simplest form Genesis® offers immediate low-level air extraction without the requirement for extensive building work.



THE BENEFITS OF GENESIS® LOW-LEVEL INCLUDE:

Room corner or mid wall installation*

- Ease of installation
- Low installation cost

Standard 250mm HVAC circular ducting

- Ease of installation
- Low installation cost

Can connect to existing HVAC system

- Low cost

Offers pressure differential with or without existing HVAC system

- Can be used anywhere to provide positive or negative pressure options—allowing optimal use of healthcare spaces.

* see last page

Optional recirculation via HEPA 14

- Can be used to improve ventilation
- Meets standards - HTM03/NHSE Guide on HEPA Filtration
- Dilution of pathogens
- Reduction in airborne infection risk
- Reduction in pathogen surface deposition
- Potential for energy reduction cost - helps towards Net Zero
- Can potentially extend AHU working life
- Low installation cost

Supply Air with or without existing HVAC system

- Flexibility of use
- Meets standards - HTM03
- Low purchase cost
- Low installation cost
- Ease of installation fit

Anti-ligature option for air grilles

- Can be used in high risk patient environments

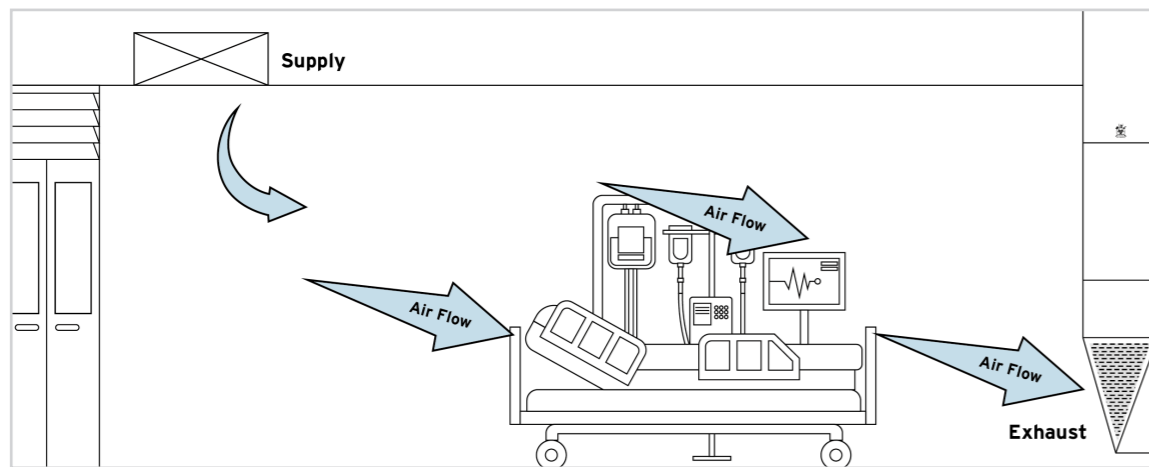
GENESIS®

Low-level air extraction that suits your needs.

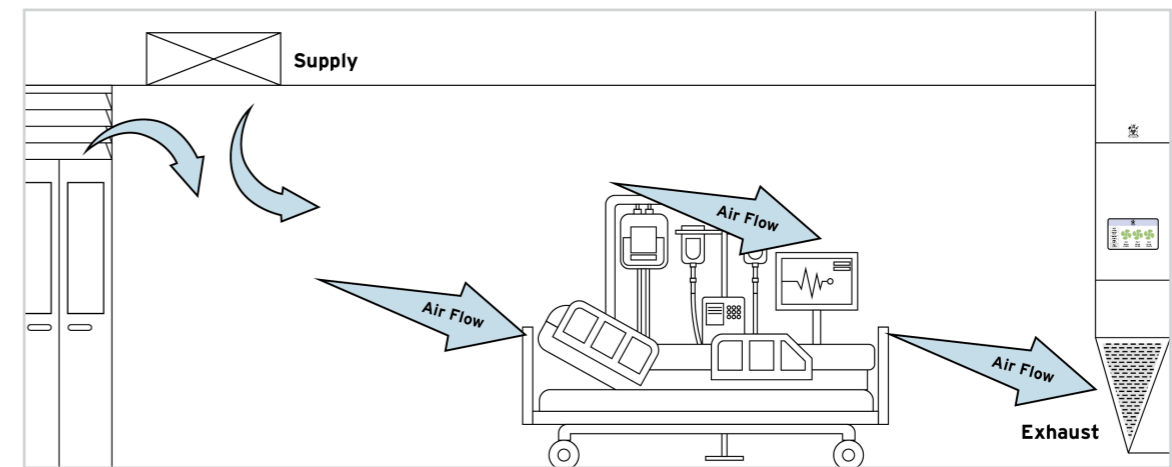
Genesis® offers a range of modular upgrades solving many ventilation challenges.



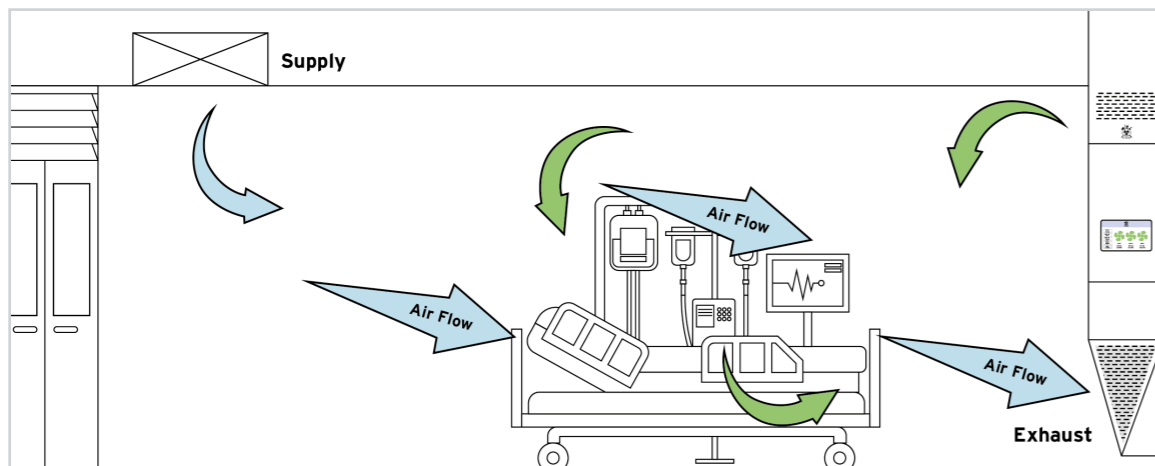
GENESIS® // LOW-LEVEL EXTRACT



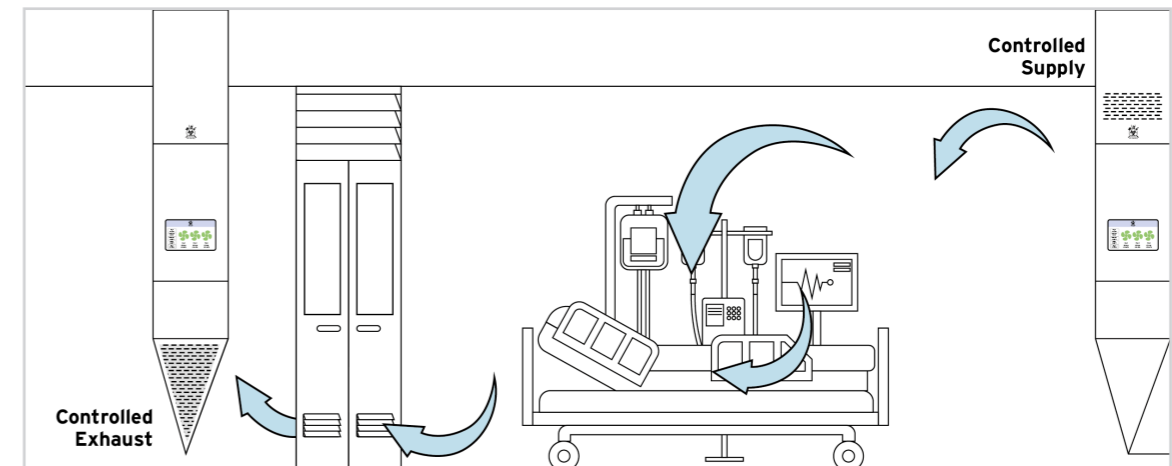
GENESIS® // LOW-LEVEL EXTRACT & NEGATIVE PRESSURE



GENESIS® // LOW-LEVEL EXTRACT & HEPA FILTERED RECIRCULATION



GENESIS® // SUPPLY WITH LOW-LEVEL EXTRACT & POSITIVE PRESSURE

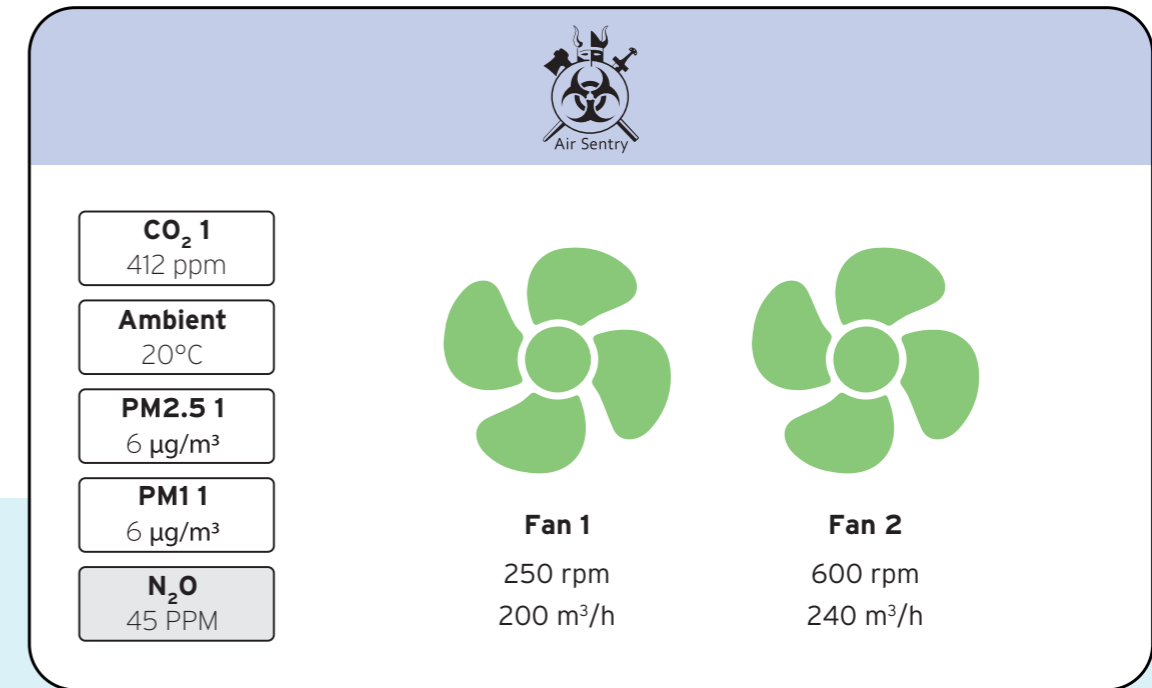
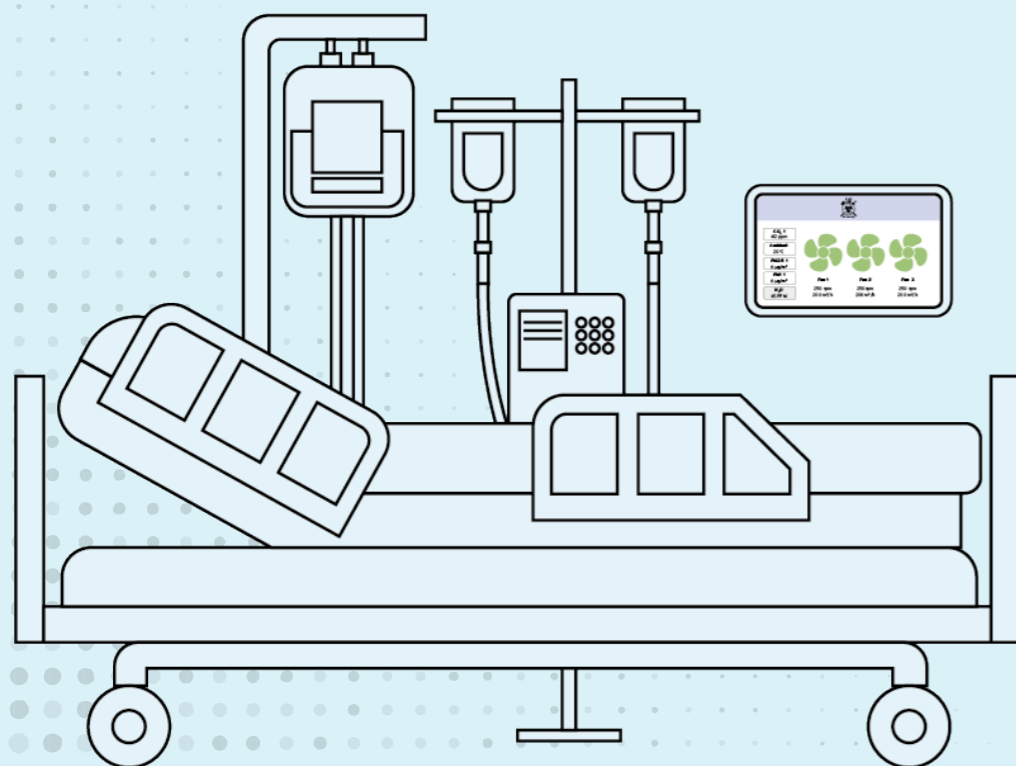


ARISTOTLE®

The pioneer in comprehensive monitoring, alerts, and controls.

Aristotle® stands as the **first of its kind**, offering a cutting-edge solution to transform the way you monitor and control air quality.

Aristotle® is designed to exceed the requirements of BS40102-1:2023 for Indoor Air Quality.



ARISTOTLE® OFFERS A RANGE OF AIR QUALITY PARAMETERS

Comprehensive monitoring of Indoor Air Quality (IAQ) parameters—Particles PM1/PM4/PM2.5/PM10; Nitrous Oxide, Temperature, Relative Humidity, Barometric Pressure, Pressure Differential, Fan Speeds, Air Flow Rates, Volatile organic compounds (VOCs)

- Instant continuous data
- Customer configurable—only monitor what is important for each environment
- Monitors N₂O—especially helpful in delivery suites.

Up to 15 rooms/zones per Aristotle® control group

- Flexibility - multiple control groups can be arrayed to form larger systems to effect a plant room or whole of hospital system
- Cost effective (e.g. One Aristotle® control group can monitor N₂O in up to 15 birthing rooms in a delivery suite)

Can be standalone or installed in Genesis®

- Can improve any ventilation system

Ethernet/BACNET MODBUS etc.

- Ease of integration into BMS

Control of DC fan speeds

- Automation of ventilation based on set IAQ parameters
- Switch between positive or negative pressure

Alarm/Alert

- Alerts to changes in IAQ
- Alerts to changes in N₂O

Control

- Both local & BMS

Useable on any HVAC system

- Low cost
- Ease of installation
- Can potentially extend AHU working life

Filter pressure differential

- Can alert for required filter change across full range of HVAC filters

Security

- Extensive security as standard. Including individual user data and access levels

Multiple Communication Options

- Full range of communication options available

Data Retention of 25 years

- Research

Future Algorithm

- Patent granted on airborne disease detection

ARISTOTLE®

Comprehensive indoor air quality monitoring

Customer defined parameters can include any of the following:

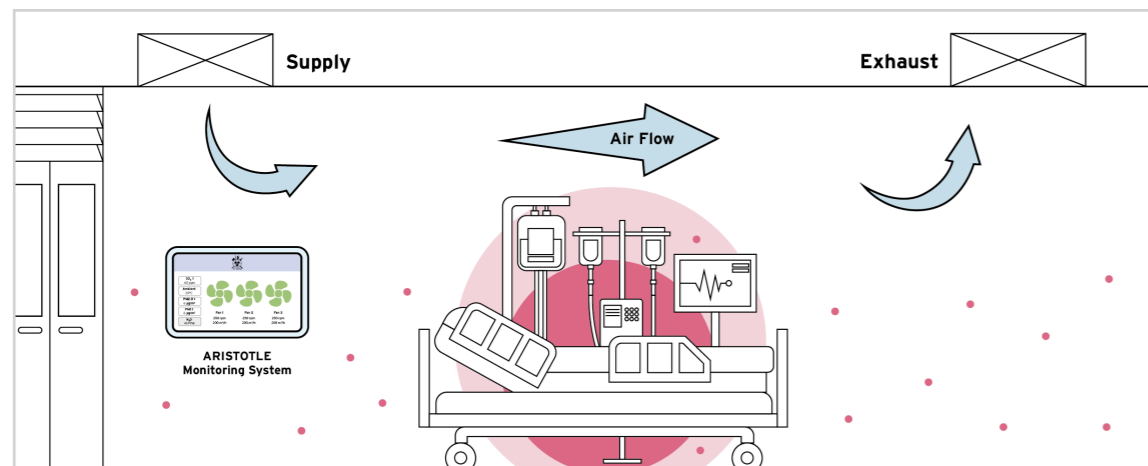
- CO₂
- Particles-PM1/PM2.5/PM4/PM10
- Nitrous Oxide
- Temperature
- Relative Humidity
- Barometric Pressure
- Pressure Differential
- Fan Speeds
- Flow Rates
- Volatile organic compounds (VOCs)
- PM4 monitoring

To be integrated soon:

- Radiation (Alpha, Beta, Gamma, Neutron)
- Radon gas via Alpha, CO, NO3 and NOx.
- Disease Detection

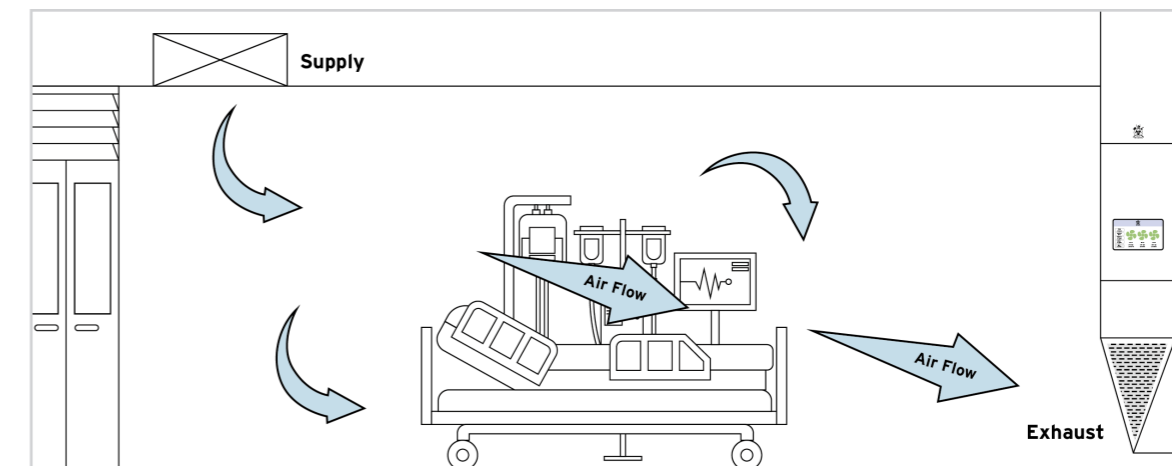
Please ask if you have a requirement not listed yet.

EXISTING AHU AND HVAC //



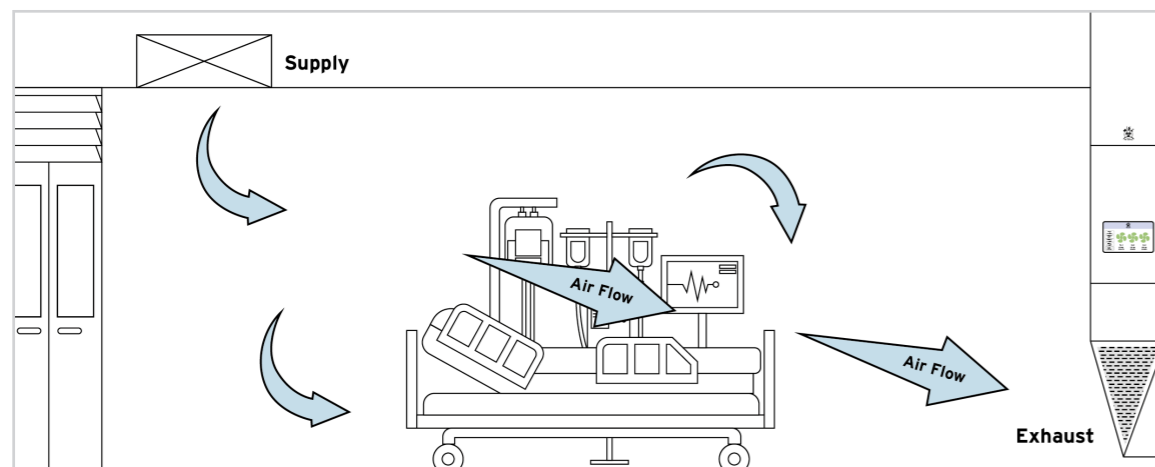
ARISTOTLE® MONITOR //

Used to lower AHU output maintaining safe air quality



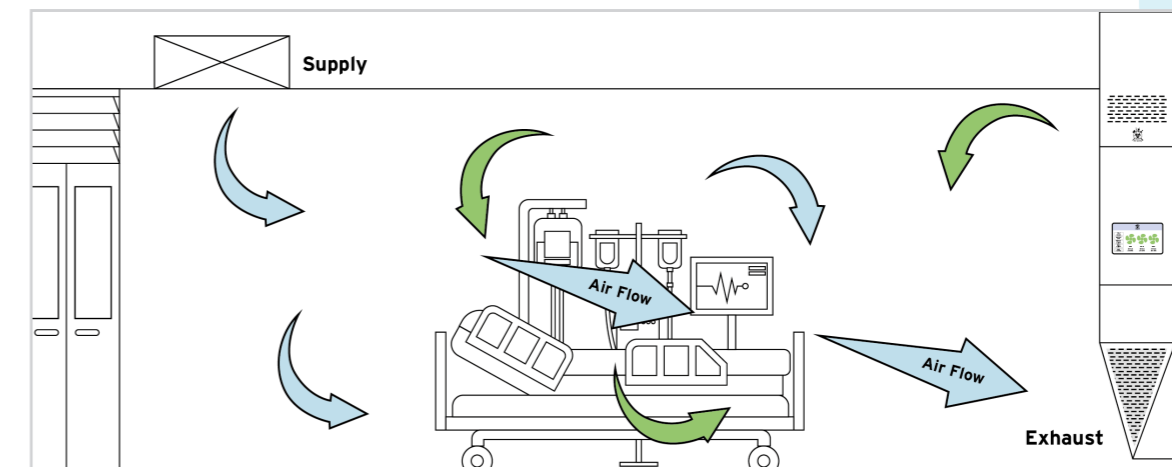
EXAMPLE OF GENESIS® //

With low-level extract and Aristole® Monitoring of IAQ parameters



ARISTOTLE® CONTROLS //

Aristotle® controls replacing supply ACH with recirculated eACH to maintain safe air parameters and reduce AHC energy usage up to 40%



ENERGY SAVINGS OF UP TO 40%

GENESIS® & ARISTOTLE®

Managing Nitrous Oxide

Excessive N₂O levels in maternity wards and birthing suites pose a risk of overexposure for hospital staff.

Current ceiling extract ventilation contributes to this issue as N₂O, being heavier than air, accumulates at lower levels.

Adhering to the new HTM-03-01 guidelines, **Genesis®** provides a low-level extract solution that effectively eliminates N₂O. Our system requires minimal building modifications, ensuring a seamless integration.

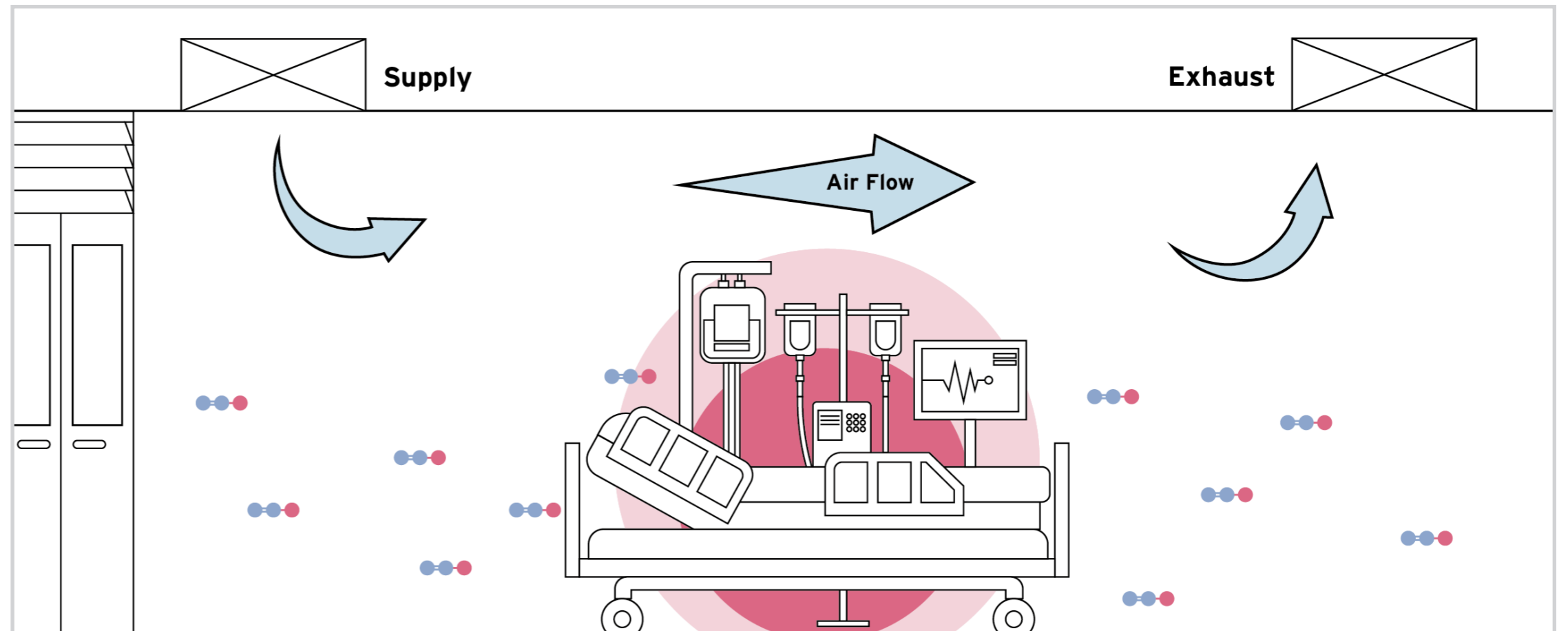
Additionally, **Aristotle®**, our advanced monitoring system, tracks N₂O and other volatile organic compounds (TVOCs), triggering alarms at predetermined levels for a proactive safety approach.

FIG 1 // EXISTING AHU

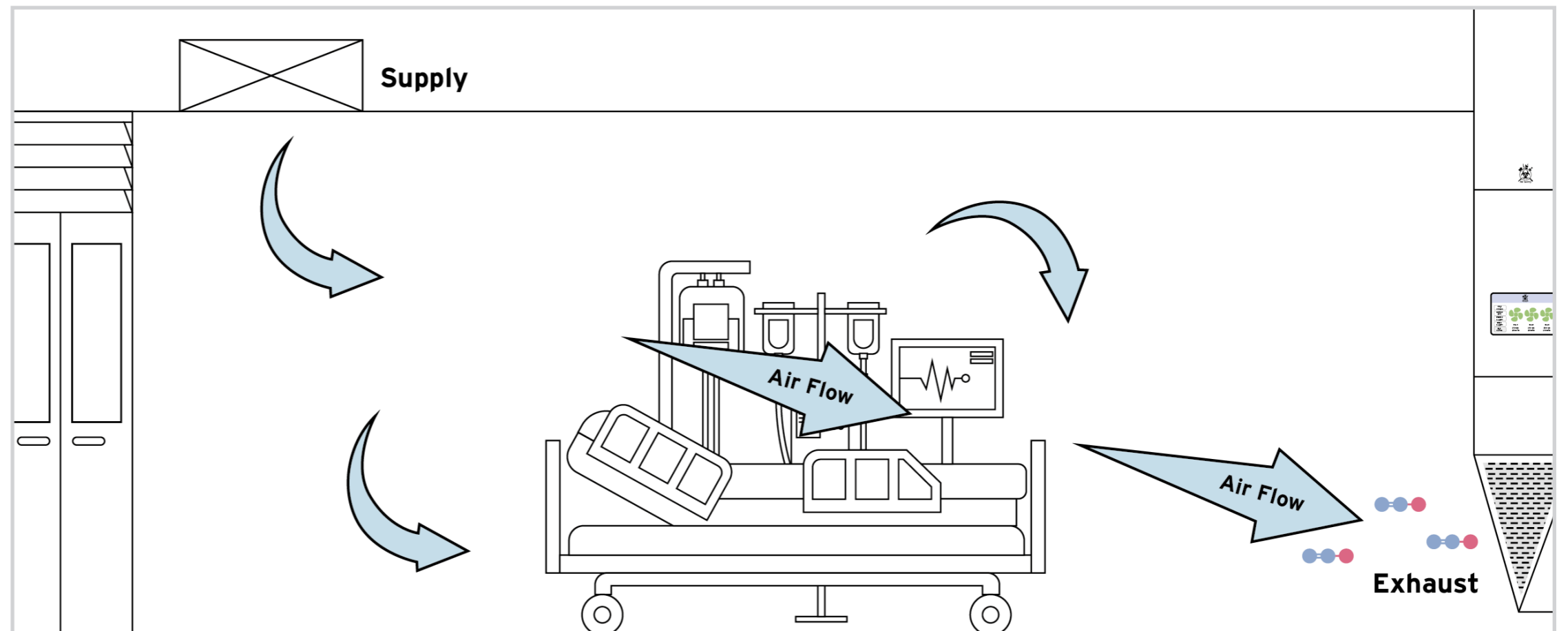
Existing AHU the main air flow is across ceiling, N₂O being heavier than air remains in delivery room.

FIG 2 // GENESIS®

Genesis® with low-level extract removes N₂O from delivery room



// FIG 1



// FIG 2

GENESIS® & ARISTOTLE®

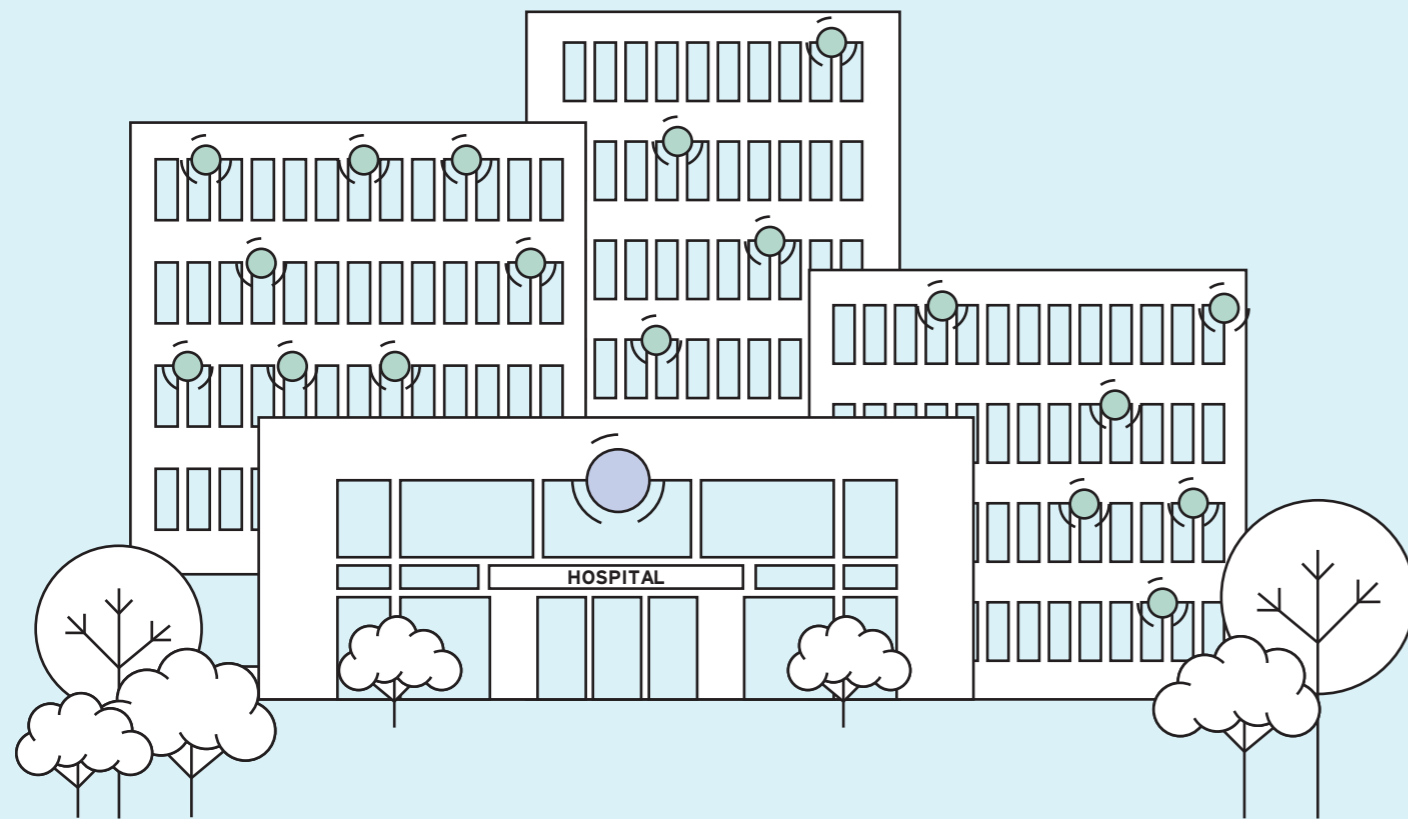
Scalability

Genesis® and Aristotle® offer a scalable solution for managing air quality in healthcare environments.

They provide a seamless transition from individual rooms to entire hospital wards and ultimately the entire facility. Whether you're addressing specific concerns in a single room or seeking comprehensive air quality control for an entire hospital, our systems grow with your needs.

By implementing Genesis® extract technology at various levels and integrating Aristotle's monitoring capabilities, you gain a comprehensive approach to air quality management.

This scalability empowers healthcare facilities to adapt and expand their air quality control measures as demands increase, putting you in control of a healthier and safer environment for both staff and patients.



● Aristotle® Zones

● Main Control Group

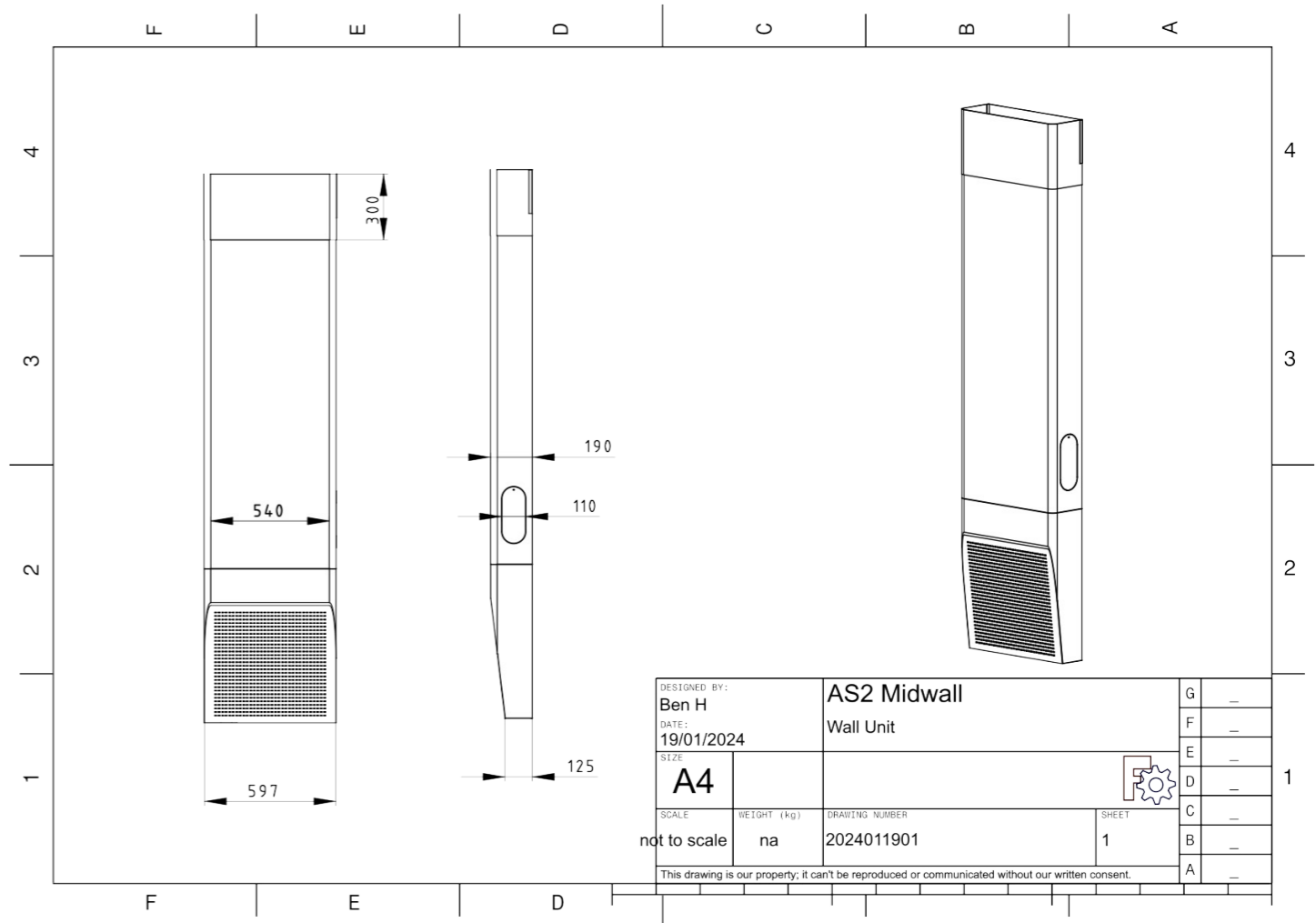
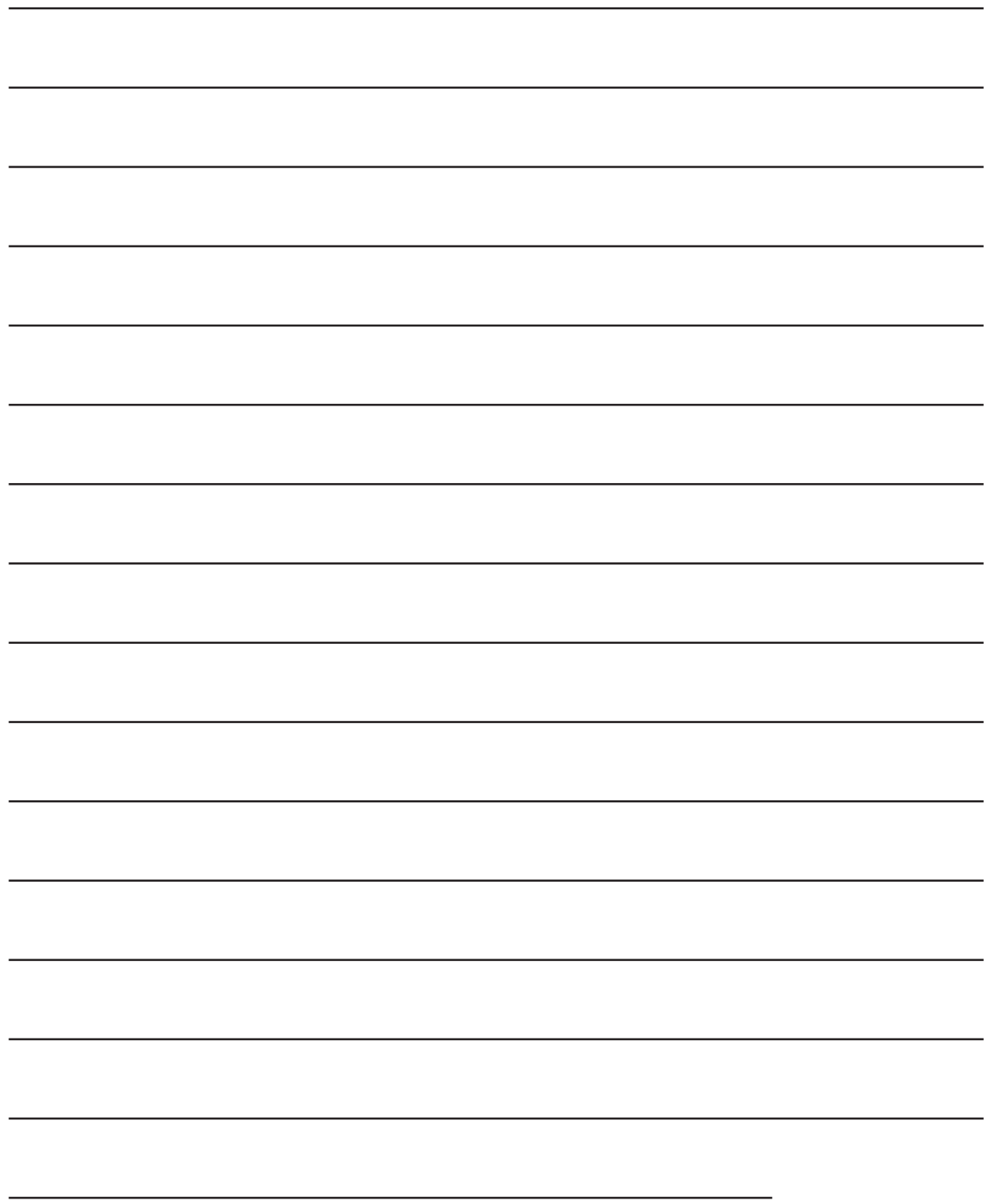
CONFIGURATION

| | Stand Alone Genesis® | Genesis® with Aristotle® | Aristotle® with existing HVAC (no Genesis®) |
|---------------------------------------|----------------------|--------------------------|---|
| Low Extract Only | ● | | |
| Low Extract and Supply Only | ● | | |
| Recirculation | | ● | |
| Low Extract with Recirculation | | ● | |
| Low Extract, Recirculation and supply | | ● | |
| Positive Pressure | | ● | |
| Positive Pressure with Low Extract* | | ● | |
| Negative Pressure with Low Extract | | ● | |
| 25 Year Data Retention | | ● | ● |
| IAQ Sensors - | | | |
| Temperature | | ● | ● |
| Delta T | | ● | ● |
| CO2 | | ● | ● |
| Particle Counts (1,2,5,4 & 10µm) | | ● | ● |
| N2O | | ● | ● |
| Barometric Pressure | | ● | ● |
| Relative Humidity | | ● | ● |
| Radiation** | | ● | ● |
| 15 Zones per group *** | | ● | ● |
| Alert/Alarm | | ● | ● |
| Filter Monitoring | | ● | ● |
| DC Motor Control/Feedback | | ● | ● |
| Communication | | | |
| Ethernet | | ● | ● |
| BACnet | | ● | ● |
| MODBUS | | ● | ● |
| Disease Detection** | | ● | ● |

*Low extract outside of room

**Future implementation

***Multiple groups can be connected into a larger system





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AIRSENTRY.CO.UK

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ABHI