



RETURN TO WORK READY BUILDINGS AND THE NEW NORMAL

As COVID-19 vaccines begin to roll out around the world, facilities managers of schools, hospitals, office buildings and many other buildings are asking, how can I create safe environments for people to return to work, public services or retail? At Delta Controls, clean, safe, and comfortable environments are our business and the pandemic has made it our passion.

Work ready environments

ASHRAE has provided a guide for building readiness. There are many different steps that are needed to provide a safe environment. Providing masks for staff and visitors, controlling the exits and entries for buildings, providing mandatory sanitizer stations, and coaching behavior of staff and visitors. Behavioral coaching won't be enough though. In the **New Normal**, the environments themselves need to be revised with the new standards of disease prevention.

ASHRAE gives guidance for the environmental building controls and maintaining healthy environments. There is a wealth of literature that experts can go through to help educate them on the steps we can take to reduce the spread of infection.

The information is critical for guiding building owners and facility managers preparing their facilities for the return of staff and visitors. **Building a Work Ready Building Plan** is up to each facility though. The guidelines can't hope to encompass the many types of facility that need to think about a returning population. The needs of a hospital or medical facility will be drastically different from the needs of a school, office building, or retail environment.



How do you make a Work Ready Plan?

This guide will help you in the first steps of creating a plan for a Work Ready Environment. You will need the right combination of experts and technology to create an effective plan. Your experts may be in-house if you're running a large facility such as a hospital or a university campus. If you're not fortunate enough to have those experts in house or you require consultation, this guide will show you the technologies used to help create cleaner environments and point you to the right experts in our channel of over 300 Partners worldwide. We'll provide contacts later in this guide that can help make a plan that is tailored to you and your facility.

What issues do I need to address in my environment?

While each facility will be different, we can start with the commonalities that will help reduce the spread of infection.



Below is a summary of what the ASHRAE Epidemic Task Force recommends:

Public Health Guidance

Behavioral coaching will largely be your part of the plan but our experts can help you create a guide to the new technology in your environment. From touchless HVAC, lighting, and access, to advanced scheduling and system integration, there will be many tools your facilities managers and staff will need to know how to take advantage of.

Ventilation, Filtration, Air Cleaning

Every facility will need an assessment to ensure that it will meet:

- Minimum outdoor airflow rate
- Filtration and air cleaning to meet MERV 13 or better levels of performance
- Verification that air cleaners provide enhanced safety and effectiveness
- Control strategies that ensure filtration and air cleaning is effective but still maintains energy efficiency

Air Distribution

Strong air currents can increase the risk of person-to-person disease transmission. Ensure that your additional fresh and filtered air distribution does not create additional risk.

HVAC System Operation

We provide solutions for touchless environmental control including HVAC, lighting, blinds, access and more. Our Partners can help you devise a touchless

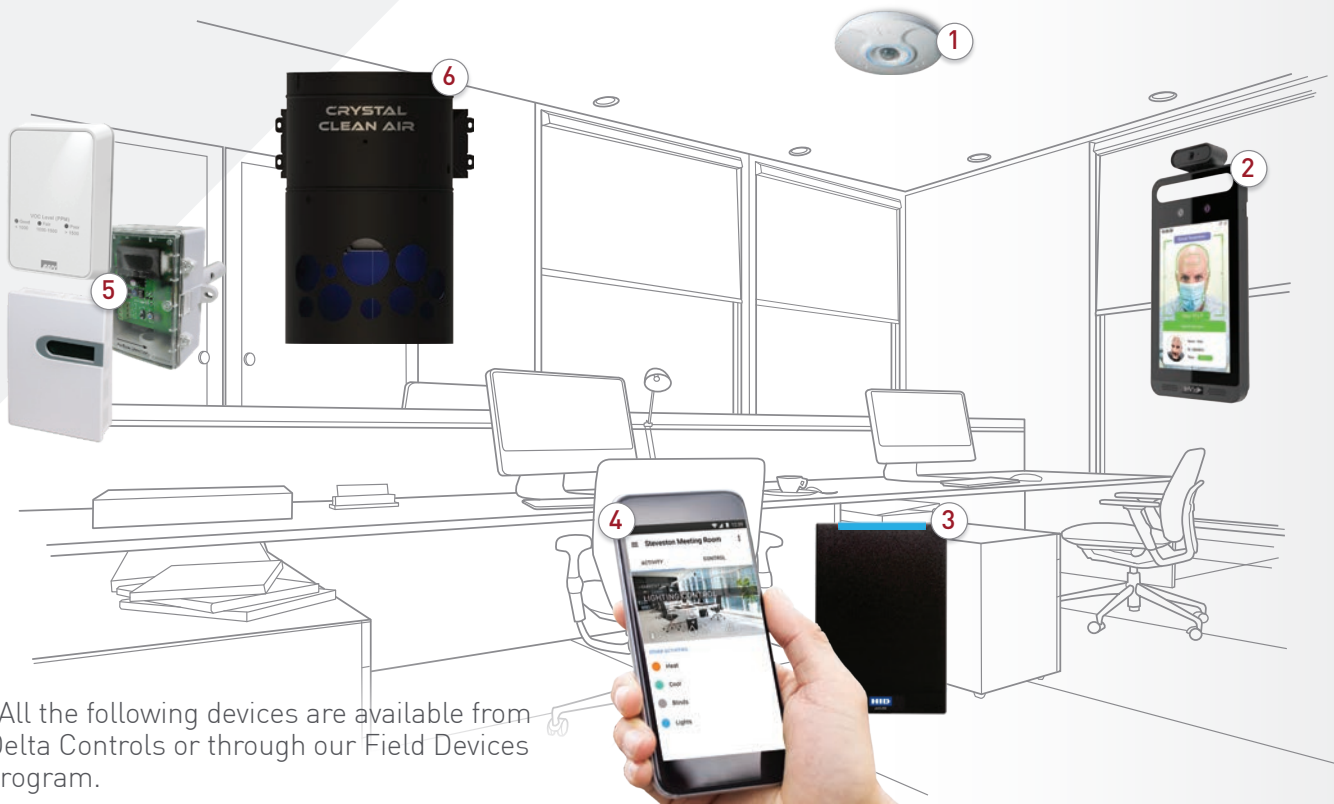
strategy that verifies results and helps keep your building occupants safe. With the latest in occupancy detection technology, we can help ensure that your new safety precautions are effective while maintaining energy efficiency.

Are these precautions temporary?

Delta Controls believes in creating environments for the life of your building. We are all looking forward to the days when COVID-19 restrictions will be reduced but the steps you're taking to reduce person-to-person transmission of disease and infection will have value for years to come. No one can predict when or if the risks of COVID-19 can be eliminated, but a facility that reduces the risk of common or critical illness can be a selling point of your organization. We encourage you to use education of your safety precautions as a selling point for your facility and your organization.



What could my new Work Ready Environment include?



*All the following devices are available from Delta Controls or through our Field Devices program.

1. Integration

The O3 series of devices from Delta Controls facilitate the creation of healthy and comfortable indoor environments. The O3 incorporates two kinds of temperature detection, occupancy via motion and sound detection, humidity, light level, and light color detection. As a native BACnet device the O3 can be added to existing networks, or be the central point of room integration for edge devices in new construction. Advanced occupancy detection using Sensor Fusion can help enable safety protocols such as isolation count downs.



2. Temperature and Mask Detection

As part of your Work Ready Building plan, the InVid TempTablet provides quick and accurate temperature detection while verifying that masks are properly in place. The sensor uses an onboard camera with integrated visual display to ensure staff and visitors are following your safety protocols. Fever is an early indicator of COVID-19 infection. The temperature detector can help you identify people who may not know that they are infected. Also available, is the InVid Body Temp Cam which can detect the body temperature of up to 16 people at once.

Product # and Name

[\(405243\) PAR-P2TEMPTABLET](#)

Product overview

The Temp Tablet is a 2 Megapixel HD terminal for temperature measurement & face recognition, with IP camera, 8 inch LCD screen and human-sounding voice prompt.

It features high-accuracy IR body temperature measurement and real-time face mask detection. It is a stand-alone device which can be easily networked with O3-DIN-CPU, O3-DIN-SRC and O3-DIN-ACCESS products.

How it helps

This series of product is specially designed and developed for face recognition and temperature measurement applications. It features non-contact temperature measurement, fast recognition and high accuracy rate. Based on a deep-learning algorithm, it combines temperature measurement, identity authorization and access control.

Applications

It can be widely used in the entrances and exits of schools, hospitals, hotels, shopping malls, office buildings, public services and construction sites for body temperature measurement, identity authorization and access control.

Optional Models

SEC-BODYTEPCAM1 is a body temperature detection network camera for up to 16 targets with a response time of 30ms.

3. Wireless Access

With the multiCLASS SE Readers from HID Controls you can control access to your spaces using a conventional card based system, or grant access with your mobile device using card emulation. Reduce high risk interactions with touchless access controls.

Product # and Name

[\(476566\) 920PMNNEKMA003 multiCLASS SE® RP40](#)

Product overview

multiCLASS SE® readers, like RP40, are part of HID Global's iCLASS SE® platform for highly secure, adaptable and interoperable access

control. Dynamic, multiCLASS SE 13.56 MHz contactless readers support a broad array of credential technologies and a variety of form factors including cards, fobs and mobile devices. It can be easily networked via O3-DIN-ACCESS products.

How it helps

The readers provide a mobile, wireless, no-touch physical access solution. This decreases the risk of disease transmission due to lowering contact with communal devices.

Applications

Suitable for use in enterprise, office, education, government and hospitality environments.

Optional Models

RP10, RP15, RPK40 multiCLASS SE® readers with different read ranges.

4. Touchless Control

The O3 Room Control app provides touchless control for our O3 Hub sensors from your mobile device. Control lighting, airflow, occupancy and more without interacting with high touch and high-risk devices such as light switches, thermostats and AV remote controls. You can set your space to occupied or unoccupied states, control blinds, lighting and even turn on TVs. This touchless control is part of our O3 Clean Solutions strategy. Already have an app for your organization? Contact us to find out about our O3 API for seamless integration of room control into your existing solution.

5. Air Quality Monitoring

Delta Controls provides many different multi sensor monitors to deliver real-time data of harmful indoor air pollutant indicators (PM10, PM2.5, VOCs, CO2, CO, HCHO). The reduction or the maintenance of low levels of these indicators can show the effectiveness of your air cleaning strategy and provide early warning when a space may be over occupied.

Product # and Name

[\(470648\) PM-R-LCD](#)

Product overview

This room mount unit utilizes a laser particulate matter sensor to detect Particulate Matter (PM) sizes from 0.3 to 2.5 μm . It features LCD display, field selectable outputs, 4-20 mA, 0-10 VDC, relay and Modbus RTU (RS485) to easily integrate with 03-DIN controllers.

How it helps

The PM2.5 series of transmitters are designed to detect particles less than 2.5 μm in diameter including smoke, smog, bacteria, dust, liquid droplets, and clusters of pollutants, and report the particle concentration of the monitored environment, also providing an indication on ionization effectiveness.

Applications

Suitable for use in any commercial indoor environment occupied by people.

Optional Models

PM-R – Room mount, 4-20mA, 0-10V, Modbus RS-485

PM-D – Duct mount, 4-20mA, 0-10V, Modbus RS-485

PMDTFRM – Particulate matter sensor, duct, 1/2

NPT-M16 & cable gland, relay, Modbus/Analog

PMOSRB Particulate matter sensor, outside mount, alarm relay, BACnet output

Product # and Name

[\(400574\) BA/BQX-B Quantum](#)

Product overview

The Quantum is a Volatile Organic Compounds (VOCs) room sensor, featuring 0 to 5 VDC or 0 to 10 VDC output which easily integrates with the 03-DIN I/O module. The VOCs level is indicated as "Good, Fair or Poor" by three LEDs on the front of the unit.

How it helps

The advantage of the VOCs sensor is that it measures air contaminants from other sources besides respiration, such as cooking odors, bio-effluence, outdoor pollutants, human activities, building materials, cleaners, perfumes, furniture, carpet off-gassing. Using a CO2 sensor for Demand Controlled Ventilation is a way of achieving high indoor air quality, rather than just CO2 dilution. The sensor converts the VOCs reading to a CO2 equivalent level which enables the use of ASHRAE's CO2-based Ventilation Rate Procedure. Monitoring VOCs levels can also indicate the effectiveness of applied ionization technology.

Applications

Suitable for use in commercial indoor environments occupied by people.

Optional Models

VOC-R-LCD – VOCs room mount sensor, 0-1000 ppb, relay, LCD, 4-20 mA, 0-10 VDC, Modbus RS-485

VOC-D – VOCs duct mount sensor, 0-1000 ppb, 4-20 mA and 0-10 VDC, Modbus RS-485

AQDT-B – Duct MEMS metal oxide semiconductor VOC sensor

Product # and Name

[\(468106\) ESENSE-R-LCD](#)

Product overview

The Carbon Dioxide (CO2) room mount sensor with display and 0-10 VDC, 2-10 VDC or 4-20 mA output is based on a single beam non-dispersive infrared technology and is a cost-optimized solution for the climate control of buildings and other processes. The concentration of CO2 is a good indication of the overall indoor air quality. ESENSE measures the CO2 concentration in the ambient air up to 2,000 ppm and converts the data into an analog output which can be easily integrated with 03-DIN I/O module.

How it helps

Reduced cognitive decision-making functions have been attributed to high concentrations of CO2 in work spaces and classrooms. Measurement data from CO2 sensors can be used in conjunction with building automation or demand control ventilation systems to create a healthier indoor climate and follow ASHRAE's CO2-based Ventilation Rate Procedure.

Applications

Can be used in any commercial indoor environments occupied by people, most suitable for use in school and office type environments.

Optional Models

CD2DT-B – Duct carbon dioxide transmitter
BA/AQPX-D-C-B – Room CO2 and humidity sensor

6. Air Ionization

Crystal Clean Air™ ionizers deactivate harmful substances like dust, pollen, fungal spores, microbes, odors, VOCs, airborne bacteria, and viruses. The ionizer provides 99.4% of PM2.5 particle reduction. The stand-alone ionizer is pictured but ionizing bars for existing HVAC equipment are also available.

Product # and Name

[\(510015\) IAA103M1-03](#)

Product overview

Stand-Alone Ionizer, 10 inch unit, 110-120 VAC, 1100 CFM. The unit is portable and can be wall mounted depending on the customer's preference. Aero-acoustical designed discharge ports continuously flood the entire room's breathing zones, pro-actively discharging hundreds of thousands of ions into the space. Crystal Clean Air™ units are maintenance free, portable, universal mounting, and industrial high-grade construction. They can be controlled with the 0-10V signal from Delta Controls BMS system.

How it helps

Ionizer uses Needlepoint Bi-Polar Ionization technology to safely clean the indoor air. It produces ions which get attracted to the charge clusters, like dust, pollen, VOC's, viruses, bacteria, mold, and smoke. Ions cause these air pollutants to agglomerate making them heavier. Heavy clusters tend to drop out of breathable zone disinfecting indoor air and lowering risk of disease's air transmission. Ionizer provides 99.4% of fine and ultra-fine particle reduction and is designed to reduce fresh air requirements per ASHRAE 62.1.

Applications

Suitable for use in schools and universities, healthcare, gyms, public restrooms, hospitality, restaurants, supermarkets, senior living facilities, office building lobby, public transportation, churches.

Optional Models

IAA013S2-03 - Mini Cassette Ionizer
A range of ionization bars which can be mounted within existing HVAC equipment



A Delta Group Company

Delta Controls is the benchmark for controls manufacturers, being one of the most respected organizations in our industry. We pride ourselves on our integrity, reliability, innovation and track record of our products and partners. At the root of our success is our people who use technology to create products that are simple, yet powerful enough to last, and we never compromise on quality. We care for the world around us, and we are proud to be a part of the integration upon which infrastructures and businesses are built.

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