

THE ISOLATOR

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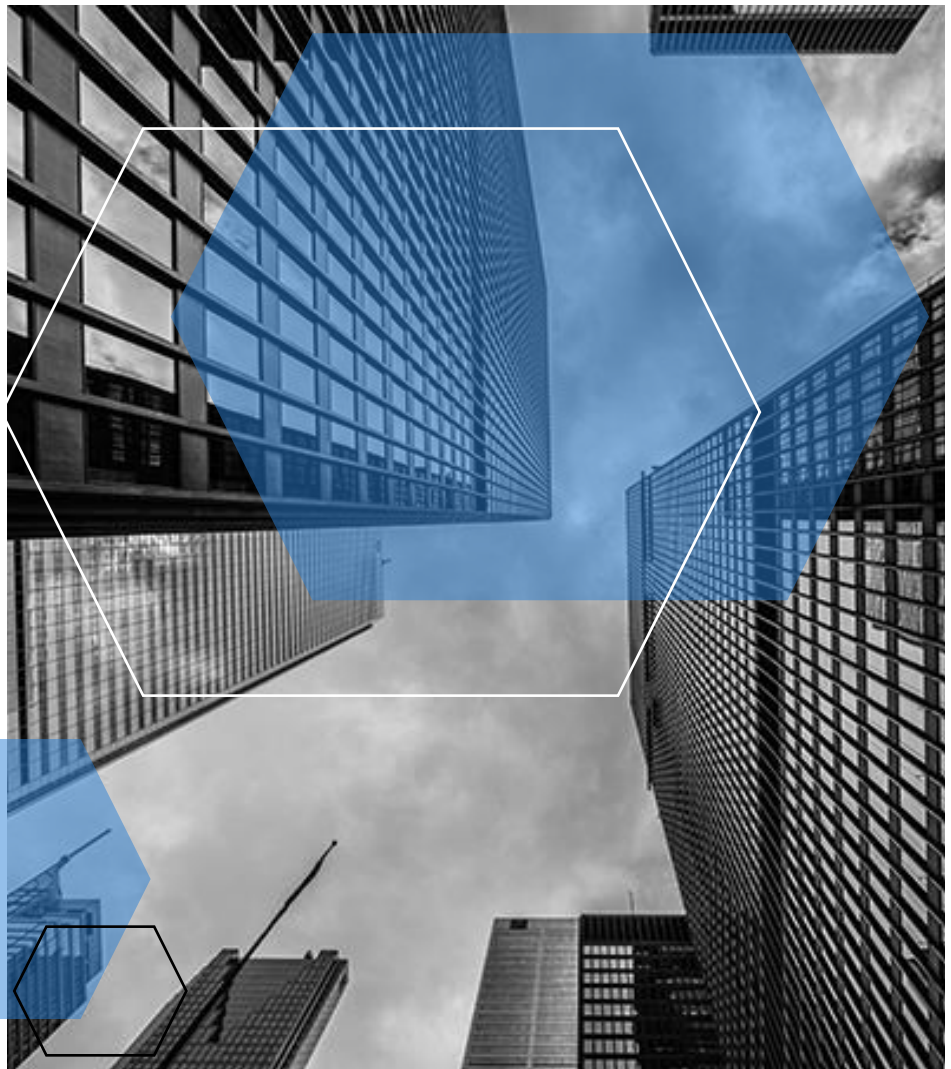
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THE ISOLATOR

August is here. Wherein the weather is gloriously warm. We hope you and your family, friends and loved ones are enjoying the season whether if it is in the beach, mall, park, or even traveling out of the country. This is also a time to relax and recharge, gear up for the coming school year for our kids.

Welcome to our August 2023 of the Isolator, the latest monthly newsletter of Kinetics Middle East LLC. We are going through projects in UAE and Kuwait wherein the engineering solutions of Kinetics takes place in these wonderful projects.

This month's edition we are going to discuss on how to understand Sick Building Syndrome (SBS) and how our allied product, Dedicated Clean Air System helps mitigate this issue.

Our YouTube tackles about one of our core products, Vibration Isolators and how it could support your HVAC system and more.



NEST- STUDENT ACCOMMODATION BY ALJADA, SHARJAH, U.A.E



Kinetics Middle East LLC was a proud participant in this prestigious project with support of M/s. Intermass & Engineering Contracting LLC., the main contractor and M/s. Geco Mechanical & Electrical LLC., The MEP contractor for the project involves supplying Acoustic products such as floating floors and Acoustic Leggings for noise control applications.

The project involves the construction of a 35,000 sqm (3.5 hectares) smart city-style student accommodation complex called Nest in its \$6.5bn (AED24bn) Aljada Residential City. The project will include 12 affordable housing blocks each comprising a ground floor and five additional floors with 2,473 units, ranging from studios to eight-bed dormitories.

Each block will have laundry rooms, social areas with TVs, study areas, a communal Amphitheatre, an art studio, a library, a running track, a dining hall, and a creative space. Different parts of the Nest will be allocated for men and women to provide privacy.

Source <https://www.bncnetwork.net/>

ASSAMI MALL – KUWAIT CITY

Kinetics Middle East LLC provided the solution for Vibration and Noise Control for the project. Wide range of products supplied includes Flexible Connectors, Vibration Isolator, Expansion Joints, Riser Supports, & Floating Floors through our long-term partner in Kuwait region M/s. Arabi Company W.L.L

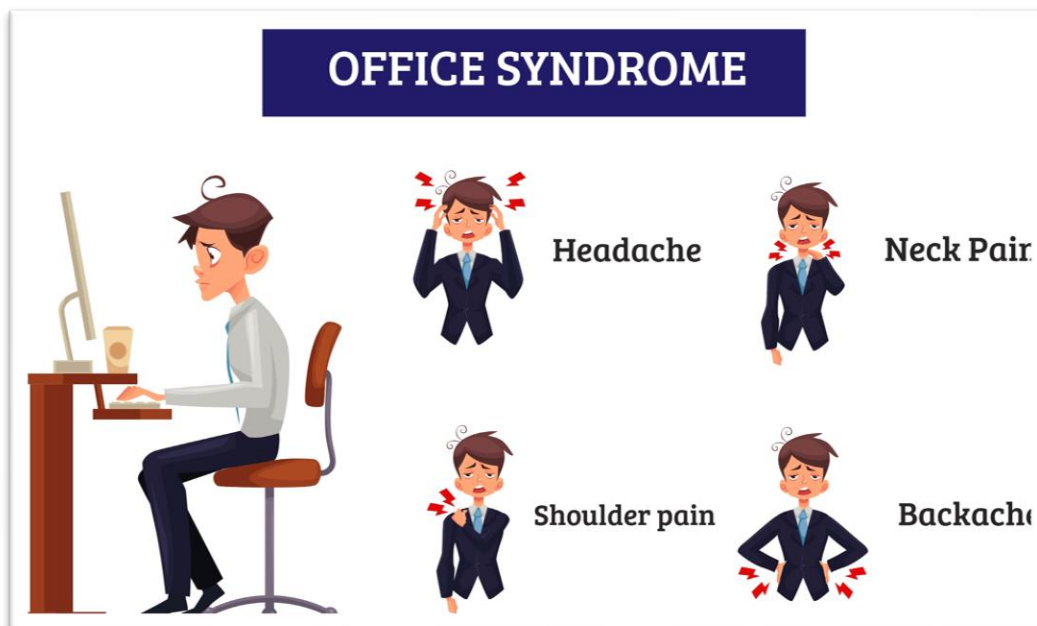
The Assima project is being built on a large plot of its size in Kuwait City with a built-up area of 380,000 square meters, featuring three main highlights; a mall with urban parks and a hypermarket, cinema, entertainment, F&B and retail stores, an office tower with stunning sea-views and cityscapes, and a residence hotel. The project will also feature ample parking to serve the three main highlights of the project. The Assima project has the great advantage of being located near to many high-rise office towers, which are the headquarters of many local and international companies.



Source <https://kuwaitlocal.com/>



TECHNICAL DISCUSSION: UNDERSTANDING SICK BUILDING SYNDROME



source <https://www.setra.com>

In recent years, the importance of indoor air quality (IAQ) and its impact on occupant health and productivity has gained significant attention from multiple organizations.

Doctors in the United Arab Emirates are warning that the environment of workplaces, could be damaging workers' health after seeing a rise in the number of cases related to Sick Building Syndrome (SBS). Office workers visit clinics every month, complaining of headaches, sore throats, itchy eyes, breathing difficulties and skin complaints; symptoms related to SBS.

One critical aspect associated with poor IAQ is related with "Sick Building Syndrome" (SBS), a condition that affects the well-being and performance of building occupants. In this discussion, we will delve into the concept of SBS, addressing IAQ issues, and the measures building engineers can take to ensure healthy and comfortable indoor environments.

Sick Building Syndrome is a term used to describe a situation in which building occupants experience acute health and comfort issues linked to the time spent within the building. Symptoms associated with SBS can vary but often include headaches, eye irritation, throat irritation, dizziness, fatigue, and difficulty concentrating. While the specific causes of SBS are not always apparent, it is commonly linked to poor indoor air quality resulting from various factors, including inadequate ventilation, chemical contaminants, and biological pollutants.

The Role of ASHRAE in Addressing IAQ Issues

1. **Ventilation Standards:** ASHRAE Standard 62.1 and 62.2 provide guidelines for proper ventilation rates and indoor air quality procedures for commercial and residential buildings, respectively. These standards take into account factors such as occupancy, building size, and pollutant sources to determine appropriate ventilation requirements.
2. **Filtration and Air Cleaning:** ASHRAE Standard 52.2 evaluates the performance of air filters, enabling building engineers to select the most effective filtration systems for reducing airborne contaminants and improving IAQ.
3. **Humidity Control:** ASHRAE Standard 55 provides guidance on thermal comfort, including recommended temperature and humidity ranges that promote occupant well-being and reduce the risk of mold growth and other moisture-related issues.
4. **IAQ Management Plans:** ASHRAE's Indoor Air Quality Guide offers comprehensive strategies for developing and implementing IAQ management plans, facilitating proactive approaches to identify and address potential IAQ problems before they escalate into SBS incidents.

Measures for Building Engineers to Improve IAQ

Building engineers play a crucial role in implementing ASHRAE guidelines and ensuring healthy indoor environments. Here are some measures they can adopt:

1. **Source Control:** Identify and mitigate potential sources of indoor pollutants, such as formaldehyde from building materials or volatile organic compounds (VOCs) from cleaning agents and furnishings.
2. **Effective Ventilation:** Optimize ventilation rates and ensure proper air distribution to dilute and remove contaminants efficiently. Consider demand-controlled ventilation systems for areas with varying occupancy levels.
3. **Humidity Management:** Implement humidity control measures to maintain indoor relative humidity within recommended ranges to prevent mold growth and promote occupant comfort.
4. **Air Quality Monitoring:** Utilize IAQ sensors and monitoring systems to assess pollutant levels and promptly identify deviations from acceptable standards.

DCAS system challenges the traditional method of improving IAQ, which introduces large volume of Fresh Air with recirculated air to dilute the building generated pollutants, VOC, inorganic compounds, etc.



PRODUCT HIGHLIGHT:

DEDICATED CLEAN AIR SYSTEM (DCAS)



An adaptive solution for sustainable air conditioning and reducing the carbon foot print.

A dedicated clean air system (DCAS) is an advance technology to improve indoor air quality of your HVAC ecosystem to reduce CAPEX & OPEX costs in all commercial building types covered by ASHRAE Standard 62.1, the Standard for Ventilation and Indoor Air Quality. Most of the commercial buildings are covered by ASHRAE 62.1, Gas phase air cleaning efficiency under ASHRAE 145.2 & Particle removal under ASHRAE 52.2. The future of really good indoor air quality is going to be alternatives to ventilation, so we don't have to rely on outside air for everything. An engineered ventilation system is more of a direct method of controlling air quality and would be classified as an "Indoor Air Quality Procedure in ASHRAE 62.1." This technology improves indoor air quality by removing contaminants generated by building materials, furniture, and cleaning supplies etc. from indoor air, and by reducing the intake of outside air polluted by exhaust from highways and airports, smoke from industrial parks and wildfires, pollen, and ozone. These products are also capable of removing human-generated CO2 from indoor air. This technology represents a vital addition to conventional HVAC systems by reducing outside air heating and cooling loads. Molecular air cleaning technology removes previously hard-to-capture contaminants from the indoor air, thereby decreasing the required volume of outside air ventilation and providing more control over air quality

BENEFITS & FEATURES

- Improve Indoor Air Quality Reduce VOCs, CO2, Formaldehyde, Inorganic Compound Etc.
- Enhanced Filtration Noise & Vibration Free Low Power Consumption Reduces Outdoor Air Requirement Reduced HVAC Load
- APPLICATIONS Commercial Buildings Healthcare & Hospitals Hospitality Industrial Application

Source: <https://zecoaicon.com/>



Kinetics YouTube –

Kinetics Middle East LLC: Vibration Isolators

Engineered for Success: Kinetics Middle East LLC Expertise in Vibration Control for your Equipment.

Learn more as we tackle one of our core products, Vibration Isolator and how it will benefit with your project.

https://youtu.be/Y7HrJYG_98s



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