



ISHRAE Speaks

ACREX India 2020 to feature “Shuddh Vaayu Deergh Aayu” live exhibit on Indoor Air Quality



Mr. Sushil K. Choudhury
Chairman, ACREX India 2020

Message from the Chairman, ACREX India 2020

ACREX India, the 6th largest HVAC expo in the world, returns to the NCR next year on February 27-29 at the IEML, Greater Noida. The theme of the 2020 show is bringing “the world of HVAC under one roof”, with state of the art products, equipment, services and technical knowledge through exhibits, knowledge workshops, student quiz - aQuest, the Curtain Raiser event and celebrating innovation through the Awards of Excellence and the Hall of Fame programs. All forces have been put together with a strong focus on building a sustainable future together.

The HVAC industry is a nation building industry. Gone are the days when an air-conditioner was thought of as a luxury item. With rapid pace of development and investment in infrastructure in the country, the role of our industry in nation building has become even more critical.

If I were to be asked to describe our industry in only two words, my most simplified answer would be “Built Environment”. What do these words - Built Environment - mean? We spend more than 80% of our time indoors. “Built Environment” refers to creation of an environment that gives us comfort. There was a time when comfort conditions were defined on only two parameters - temperature and humidity. In today's time, a third new and very important element has been added to this: the quality of indoor air (IAQ). IAQ gets affected by both indoor and outdoor pollutants, and studies have shown that it has a major impact on human health.

ISHRAE and ACREX India have always led by example - we started with giving a sneak peek into how we could build a Net Zero Energy home through our live exhibits - “Shunya” in Delhi in 2014 & and “Prana” in Bangalore in 2015.

Since outdoor pollution and its detrimental health impact

on IAQ is a major problem in our country and in the NCR in particular, we would be introducing a live exhibit in ACREX India 2020 called “Shuddh Vaayu Deergh Aayu” (SVDA). Translated in English, this means 'Clean Air, Longer Life'. The objective is to create awareness about how to live healthier by improving the indoor air quality in our homes, offices, schools etc. This exhibit will showcase the effectiveness of different products in the market and possibly provide the experts' insights into what could be the most effective solution in a given situation.

We are hoping that by showcasing this exhibit to architects, builders, home-owners and policy makers in the government sector, we can help improve the lives and health of our fellow citizens by advocating for formulation of suitable policies and guidelines. We are also considering a special SVDA Pavilion, where 20 or so IAQ product suppliers can showcase their products in an exclusive show-and-tell form of exhibit. We also plan some dedicated lectures and papers on this theme to provide a holistic approach to the initiative.

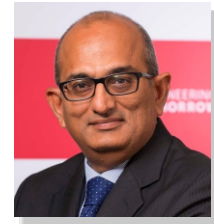
Along the line of the main theme of the event, we would once again be hosting a power-packed delegation of international association heads during ACREX India 2020 and get the largest international exhibitor presence to date. Huge plans are underway for promoting India and ACREX India internationally and it is also our endeavor this year to get buying delegations from our neighboring countries.

To conclude, I would strongly urge you to come ahead and book your space and partnerships today. As you may see from the layout of the venue, the locations are going away very fast. An urgent action will ensure a prominent location for your company. I wish you all the best and look forward to seeing you all at ACREX India 2020.



ACREX Hall of Fame Partner

A smart approach towards commercial buildings with Danfoss



Mr. Ravichandran Purushothaman
President, Danfoss India

Urban expansion in India is happening at a speed unlike anything the country has seen before. Rapid industrialization and commercialization are causing the rural population to shift to urban areas with the outskirts being engulfed by city limits. This development is relentless, and the need of the hour is for commercial buildings with great design and even better efficiency in order to create a better tomorrow.

Nearly one-third of global energy is used up by commercial buildings. India is the seventh largest energy consumer in the world and out of which energy usage in buildings accounts for 33 per cent of the nation's energy use. With the current climatic conditions and the swiftness with which commercial buildings are cropping up across city spaces, it is important to control the negative impact of urban sprawl by embracing sustainable development.

The fact that global warming is on the rise and that the resources are depleting, stresses on the need to adapt energy efficient solutions with sustainability at its core. This means that the infrastructure sector must work in tandem with sustainability while catering to the increasing demands of commercial buildings.

In the process of embracing sustainability, the first point of action would be to define energy efficiency goals that are specific, measurable, actionable, realistic and time-bound. When these principles are put into motion, they have the ability to drive large scale savings - both monetarily and environmentally.

Energy consumption during the construction of commercial buildings is very high, therefore focus should be on deploying low-carbon technologies that will ensure minimum negative impact on the environment.

Danfoss believes in engineering tomorrow, today with an unwavering commitment towards delivering technologies that help save energy in smart cities. The company's tailor-made solutions for commercial buildings warrant for low emissions, and cost savings without compromising quality

or comfort. Whether it's hotels, offices, supermarkets or other public spaces, Danfoss has specific applications or holistic solutions for any commercial building.

Danfoss technologies for commercial building aim to meet the growing need for modern infrastructure in the country. To this length, the Danfoss campus in Chennai has received a Leadership in Energy and Environmental Design (LEED) Platinum rated certification for its green and sustainable set-up.

As an industry leader, every year under the ACREX Hall of Fame, Danfoss along with ISHRAE recognizes the excellence achieved in conserving energy by commercial buildings in the Indian subcontinent.

The nominations for ACREX Hall of Fame 2020 can be submitted online. I would encourage stakeholders from the Commercial buildings fraternity to visit the ACREX and ISHRAE website to learn about the past inductees as also nominate their buildings.



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Registrations for ACREX Hall of Fame close on
31st August, 2019

Find more details on
www.ishrae.in/home/AcrexHallOfFame



Partner Preview

What is NEEDED to protect you from Indoor Air Pollution and why?



In a typical Asian family, one out of the four is adversely affected by indoor air pollution. Multiple studies have confirmed that exposure to elevated levels of air pollution increases the likelihood of developing influenza, respiratory infections, bronchitis, asthma, etc.

Particulates can cause respiratory infections, chronic bronchitis, and can also lead to exacerbation of COPD. Sulfur Dioxide and Nitrogen Dioxide cause wheezing and exacerbation of asthma including respiratory infections and deteriorates lung functions resulting in cardiovascular disease.

In this situation, an individual's behavior and the will to breathe in a clean environment can do wonders and enhance one's life span by improving the overall health of human organs. Today, it becomes essential to care about the breathable air, which contains a lot of contaminants including UFPs (Ultra Fine Particles); VOCs (Volatile Organic Compounds); and other harmful Gaseous pollutants to minimize the effect of air pollution on the health of a person. Even the cases of influenza have increased which is mainly due to exposure to PM10, diesel exhaust, nitric oxides, sulfur dioxide, and ozone.

Indoor air pollution is even more deadly because we spend 90% or more of our time each day indoors. Making a few small changes to habits and indoor environment can provide us the purest form of breathable air to keep the brain and lungs clean.

These facts hold universal affirmation by any family living in high pollution zone like most of the metropolitan cities of India, especially the Northern region of the country. Yet, at the same time, the family is uninformed about the main cause of this problem, leading to an uncontrollable situation, where a person does not know what the remedy, apart from the medicinal treatment, is.

The influx of various new technologies in air purification industry, without the much-needed information (know-how), has caused more confusion to the end-users in making the right decision for right product/technology which can seriously protect them from harmful pollutants.

In today's ever-changing technology scenario, consumers are forced to make a choice from the broad range of not-so-effective and highly marketed technologies. Hence, it is more imperative to know what your air purification system should be capable of, which can provide a healthy indoor environment. Few of the features that should be kept in mind while selecting a system for your better health are listed below:

- **Overall Efficiency of Air Purifier** – The unit should be sealed tight enough so that no polluted air can be supplied to the subject space.
- **Life of Filters** – One should look for a unit which has washable Pre-filter so as to attain enhanced life of other filters.
- **The efficiency of HEPA filter** – It is important for end-user to go with advanced HEPA form of filter which can remove 99.5% of particles down to 0.003 microns. This will even take care of Ultra-fine particles (UFPs) which can get into human lungs and bloodstream, causing heart disease.
- **Is your air purification unit capable of handling gases and odors?** Molecules that comprise gases, odors, and VOCs are not solid and will float through even the densest advanced HEPA filters. The consumer should always emphasize on filter media which can control gases and odors.

For detailed information, you may contact Vaibhav Goel at vaibhav@breatheeasy.com



Partner Preview

Smaller, lighter, better - FanGrid Solutions for High Air Performance

ebmpapst

The ebm-papst Group is the world's leading manufacturer of fans and motors. Since it was founded, the technology company has continuously set global industry standards: from the digital interconnection of electronically controlled EC fans to aerodynamic improvements for fan blades to the use of eco-friendly materials.

In fiscal year 2017/18, the company achieved sales of over € 2 billion.

ebm-papst employs over 15,000 people at 27 production sites (e.g. in Germany, China and the US) and in 48 sales offices worldwide. Fans and motors from the world market leader are used in many industries, including ventilation, air conditioning and refrigeration, household appliances, heating, automotive and drive engineering.

To achieve high air performance in ventilation technology, several smaller fans are combined to create a FanGrid. ebm-papst now has FanGrid modules with RadiPac centrifugal fans in its product range – with automatic resonance detection for more operating reliability.

Many applications require high air performance. Data centers, large industrial building complexes, hotels, residential complexes and hospitals are all typical examples.

Cubes prevent installation loss

At ebm-papst, fans for a FanGrid are installed in a support structure. The cube has extra-generous dimensions to prevent the undesirable installation loss that arises when fans are positioned too close together and can influence each other.

Automatic resonance detection for more operating reliability

Depending on the installation situation, resonance can cause vibrations within specific speed ranges. Such vibrations can damage the bearing system of electric motors and lead to fan failure. This is why ebm-papst has developed automatic resonance detection that minimizes the effects of vibration – vibration velocity – for its RadiPac centrifugal fans.

Energy-efficient EC technology with convenient closed-loop control

The driving force behind the fans installed in the fan grid, are the modern EC motors, which are highly energy efficient in both full- and partial- load operation. The FanGrid line is rounded out by a new controller that easily activates fans operated in parallel. It requires minimal wiring work. ebm-papst FanGrid modules are available as plug & play- compatible units or as complete kits consisting of the fans, air inlet grill, support plate, corner connectors and spacer profiles for direct installation on site.



Smaller, lighter, better FanGrid Solutions for High Air Performance

Smaller, lighter, better: FanGrid

In practice, FanGrids have many benefits. The individual fans can be arranged next to or above each other to save space. They significantly improve air distribution and ensure a more even airflow through upstream or downstream components such as filters or heat exchangers. Their redundancy also increases operating reliability, since the other fans compensate for missing air performance. The relevant redundancy requirements can be taken into account during the selection process.



Partner Insights

AHRI's effort to move USTR's Tariff List on Chinese Products

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is the voice of the industry, with 300+ member companies producing more than 90 percent of the residential and commercial air conditioning, heating, water heating, and commercial refrigeration equipment made and sold in North America and across the globe. Through their certification program, standards, advocacy, and other activities, the organization strives to help save energy, improve productivity, and ensure a better environment.

The focus is on advocating for sound policy for the members, which allows them to deliver quality products to customers, employ more people, and build more innovative products. Their primary activities, international standardization and certification, scientific research and analytics, and advocacy allow to be a globally relevant knowledge base that is actively involved in public policy pertaining to sustainability, climate change, energy efficiency, and trade issues both internationally.

Trade and tariffs have been a big issue for AHRI and its members this year, having twice surveyed the member companies about their views on the Section 232 tariffs on steel and aluminum and the Section 301 tariffs on Chinese

goods. In both surveys, majorities of those responding stated that they were negatively affected by both Section 232 and Section 301 tariffs. AHRI opposed these tariffs in the advocacy efforts both with the executive branch agencies responsible for trade policy, and with U.S. government.

While these tariffs have exclusion processes in place, AHRI has found them to be troublesome. Last month, AHRI raised concerns regarding the burdensome and slow Section 301 tariff exclusion process, noting that both the Section 232 and 301 tariffs increase costs for manufacturers and consumers; dampen the availability of more energy efficient equipment; and create a higher demand on the electric grid.

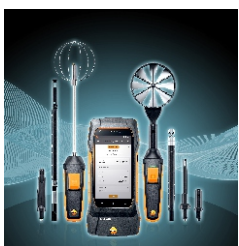
While the Department of Commerce originally estimated that it would receive 4,500 Section 232 exclusion requests, it has to date received 85,289 requests. The Office of Inspector General recently found that 96 percent of Section 232 tariff exclusion requests with objections miss the processing deadline of 106 days, which slows the request process. As a result, the Office of Inspector General will create a report, which will include recommendations for remedial action by Commerce.

Partner Preview

Testo 400 – The intuitive air velocity & IAQ measuring instrument



The measurement technology expert, Testo, brings in the new generation of IAQ measurement technology: The new testo 400 is the universal measuring instrument for all air flow and IAQ applications, and impresses with smart technology, fast readiness and convenient application.



With the testo 400, Testo has cleverly extended its range of measurement technology for all volume flow and comfort measurements. The universal testo 400 is not just smarter, faster and better – it is also seamlessly integrated into Testo's comprehensive IAQ range.

The range of probes for the new measuring instrument is among the broadest on the market. In addition to this, the Testo Smart Probes can also be connected to the universal measuring instrument. The testo 400 itself offers innovative functions which make the user's job easier in every way, and allow reliable, norm-compliant measurement incl. documentation.





Product Overview

- **Intuitive with Measurement assistant:** The testo 400 features clearly structured and unambiguously guided measurement menus which guide the user safely and easily through the whole application.
 - The instrument is so smart that it guides the user during measurement procedure by automatically highlighting the points of measurement, depth of probe insertion and grid area. This intuitive and innovative feature enables the user for a seamless experience.
- **Universally applicable:** Thanks to the broad selection of probes, all IAQ, ventilation and comfort parameters can be precisely and reliably measured.
- **Always ready to go:** If probes need to be calibrated, this is possible independently of the measuring instrument. The testo 400 can continue to be used with other probes while the affected probe heads are in service for calibration.
- **Saving time:** The new testo 400 allows all probes to be quickly and easily exchanged during the measurement eliminating the need for a bothersome instrument restart, and the waiting times.

The documentation of the measurement job can be finished directly on site with the customer & the measurement reports can be conveniently sent by e-mail and are also stored in the instrument.



Product Features

- Can measure °C, %RH, CO, CO₂, m/s, Lux, hPa
- Convenient smart touch operation with front and rear camera to capture live images.
- High-precision, location-independent and integrated differential pressure sensor

- Compatible with a wide selection of Bluetooth & wired probes, as well as testo Smart Probes & testo 440 probes
- 5.0" HD touch display with 1280x 720 px resolution
- Zero-error display: Adjustment function at up to 6 measuring points
- Intelligent calibration concept with HD graphic display.

Smart and intuitive measurement programs

- HVAC grid measurement in accordance with EN ISO 12599 and ASHRAE 111
- PMV/PPD in accordance with EN ISO 7730 and ASHRAE 55
- Draught and degree of turbulence in accordance with EN ISO 7730 and ASHRAE 55
- WBGT measurement in line with DIN 33403 and EN ISO 7243
- NET measurement in accordance with DIN 33403

Multiple application areas

- Volume flow measurement in duct outlet with funnel and pitot tube
- Thermal comfort measurement (PMV/PPD), NET temperature and Indoor Air Quality
- Volume flow via K factor and differential pressure measurement (ASHRAE 111)
- Thermal comfort measurement
- Energy efficiency of green building (SFP value), current, heating / cooling load measurement
- Differential pressure measurement with mould risk measurement
- Radiant heat measurement

For more information, you can write to info@testo.in or visit www.testo.com

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