For the past 55 years, Bry-Air has been specializing in designing and manufacturing desiccant-based engineered dehumidification systems capable of handling demanding applications in sectors such as food processing, lithium-battery, pharmaceutical, semiconductor, electronic industry, turbine storage, cold storage etc. Today, Bry-Air is the world leader in dehumidification.

With subsidiaries in China, Malaysia, Brazil, Nigeria and Switzerland, and an associate plant in the USA, Bry-Air has footprints across the globe. The company’s range of products finds application across industries and has installation in over 80 countries including Southeast Asia, China, CIS countries, Indian subcontinent, West Asia, Middle East and Africa including South Africa & Australia as well as USA and Japan.

A Mechanical Engineer by education, Vijay Chaudhry, Executive Vice President, International Business, Bry-Air (Asia), leads the entire International business and direct exports of the company. Talking to Indusfood-Tech, Chaudhry gives insights from his experience of over 28 years in managing the entire business value chain. He elucidates on the importance of industrial air treatment technology for the food processing industry and also gives a brief on the new technologies recently introduced by the organization. Following are a few excerpts from the interview:

**Indusfood-Tech:** Tell us about the company’s formation and growth story? How have you evolved as a business in India and abroad?

**Vijay Chaudhry:** Bry-Air is the leader in dehumidification worldwide. We are a global solution provider for dehumidification and drying, gas phase filtration, plastics drying, conveying & mould dehumidification, high-temperature waste heat recovery, dry rooms critical for lithium battery production and energy-smart cooling using waste heat. Bry-Air (Asia) has been at the forefront of dehumidification, and industrial air treatment technology with product range supplied globally. We have subsidiaries in China, Malaysia, Brazil, Nigeria and Switzerland, and an associate plant in the USA.

ISO 9001:2015 and ISO 14001:2015 certified, Bry-Air plants are among the most modern in the industry, supported by strong R&D & testing, computerised 3D designing, CNC fabrication, powder coating facilities and automated conveying system. The R&D centre at Bry-Air is recognized by the Department of Science and Technology and is undoubtedly one of the finest in the industry. The centre is continuously engaged in state-of-the-art product development in desiccant based and fluted media technologies.

**Indusfood-Tech:** What are the key product categories you cater to? And what are the major end-use sectors where you are witnessing good demand for your equipment?

**Vijay Chaudhry:** Bry-Air has over 55 years of experience as a trusted solutions provider across industries like food processing, pharmaceuticals, lithium battery manufacturing, cold stores, data centres, plastics processing and process industries, etc. around the world. We specialise in identifying, researching, and providing customised technologically advanced solutions to our customers across various sectors to cater to their varied requirements.

The F&B sector is one of our primary demand sectors, and we have a variety of advanced dehumidification and dry air solutions to cater our international and national customers from this sector. In India and globally, second to pharma,
food is one sector where maintaining hygiene and quality are the biggest tasks. Food processing companies face many moisture-related issues such as long drying time, frequent downtime of production units, and loss of crucial characteristics of food product. This will lead to inferior product quality and reduced shelf life. Therefore, it becomes imperative to tackle the moisture menace during product drying, processing, packaging, and storage.

The solution is Bry-Air’s Desiccant Dehumidifier which provides the most effective and economical solutions to humidity-related problems during product drying, processing, packaging and storage. It helps in speeding up drying process, consistent production, uniform coating, maintain food quality and shelf life.

**Indusfood-Tech: How is the food processing industry evolving in India and how is it impacting demand for your products?**

VC: The changing lifestyle, paucity of time, and need for convenience have increased our dependency on the packaged food. With this, snacks, crackers, instant tea, instant coffee, powdered milk, powdered sugar, instant soup, instant noodles, etc., demand increased level of sophistication in processing, packaging, and storage.

In processing powder foods, especially health foods like protein supplements, infant food, soup powders, cocoa as well as gelatines, dehydrated soft drink concentrate, instant coffee powders, concentrate fruit, etc., the presence of moisture in the surrounding air can cause lumping and caking of food concentrate. It causes the tiny particles to stick or cluster together, thus inhibiting their free flow in the manufacturing or packaging process.

Many granular or powdered materials are transferred to packaging via high-velocity air streams. This process is commonly referred to as pneumatic conveying or just airveying. Highly hygroscopic materials like sugar, starches, beverage and food powders make humidity control a crucial element of materials handling systems. The transportation of powdered, granulated or flaked material by high-velocity airstreams can significantly be improved by drying the air.

The solution to the problem lies in maintaining required stringent conditions of temperature and humidity and in surrounding the processing, packaging and storage areas with dry air. Bry-Air desiccant dehumidifiers are designed to meet next-generation industry needs and are compliant with international standards. Our dehumidification solutions ensure right humidity conditions are maintained in processing, coating, and packaging areas. Bry-Air desiccant based dehumidifiers lower the moisture content of the surrounding air, maintaining RH as low as 1% at a constant level regardless of the ambient conditions during production, storage and packing to help improve the quality and retain the freshness of the processed food longer. Many food processing and confectionery manufacturers and exporters rely on Bry-Air Dehumidifiers to maintain and achieve high level of product quality in the processing, packaging, and storage areas.

Our dehumidifiers have also been successfully functioning during the gum coating process at various facilities across the country and internationally.

**Indusfood-Tech: How strong has been the role of the R&D for your business to be a success? Any major R&D/innovations that you might wish to share with us?**

VC: Pahwa Group lays much emphasis on research and development. The group has filed 123 patent applications for 13 new technologies, at national and international level, out of which 46 patents are granted/already allowed. At Bry-Air, we have always been at the forefront of technology and innovation through extensive R&D in moisture control, air treatment and optimisation of energy. Bry-Air’s efforts to introduce cost effective energy saving solutions like BrySmart series has resulted in the development of energy saving technologies.

Continuous R&D in designs, layouts, machinery and production methods, which is integrated into the everyday work pattern. Research-based development lends Bry-Air the leadership position it stands at today.

Bry-Air’s R&D facilities are recognized by the Department of Science and Technology and are the best in the environment control industry, worldwide, in the corporate sector.

Some of the new technologies recently introduced by us are BrySmart, DryPurge, Adsorption Chillers and BryWheel Dryer. We have been granted patents for the following technologies: BrySmart® — Unique dehumidification Control System BRYSCAN® — Real-time moisture analyser DryPurge® — Technology for ultra-low dew point New Control for Dehumidifiers™ — Improved method and apparatus for control of solid desiccant dehumidifiers Macroporous Honeycomb Matrix — Chemical filter with 100% efficiency Filed ……and many more

**Indusfood-Tech: How do you plan to expand your business in the next five years?**

VC: The Green DryPurge (GDP) and BrySmart (BBS) Series are examples of the exponential advancements which Bry-Air has made in dehumidification space to cater to the modern needs of the industry. The GDP technology is the most efficient dehumidifier <1% RH dry rooms. The BBS dehumidifier is the all-new, forward-looking and intelligent dehumidifier. It is a green product, high on energy saving, simple yet cost-effective solution for all your humidity related problems across diversified industries. The product is embedded with the patented BrySmart™ and BryTherm™ technologies and is capable of delivering up to 48% energy saving, plus an additional 20% through the customized rotor, which reduces initial react energy input for equivalent performance of standard dehumidifiers. This is how we are expanding our kitty of equipment, offerings and services.

**Indusfood-Tech: How is the food processing equipment industry expected to grow in the future? What will be the drivers of the growth?**

VC: According to Invest India’s recent statistical report, the processed food market is expected to grow to US$ 543 bn by 2020 from US$ 322 bn in 2016, at a CAGR of 14.6%. India ranks 2nd in terms of total food production globally, next to China. The industry has and is growing at a swift pace.

To match the growing consumer needs and awareness, the industry is incorporating more and more sophisticated food processing equipment and machinery to maintain growth. Every food processing company is endeavouring to ensure that the food product reaches the consumer with the right flavour, perfect shape as well as a long shelf life.

**Indusfood-Tech: What has been the progress of your business on the export front and which are the main markets you have successfully penetrated? What are your future strategies to tap your potential target markets?**

VC: All major F&B brands in India exporting to the various countries are our customers. Our products are installed in over 85 countries and are successfully enabling F&B players to deliver what the customers need.

The growing customer awareness and appetite for quality and safe products have made manufacturers, and exporters go for the best equipment during the various processes of manufacturing. With a marginal increase in investment, food companies have relied on Bry-Air dehumidifiers to ensure compliance of international and domestic food standards and regulations. Leading multinationals and Indian conglomerates operating in the food and beverages sub-segments like noodles, etc. across continents have installed Bry-Air dehumidifiers and reaped the benefits over the years.
Once the food manufacturers and exporters began using dehumidifiers, they realize that many of their pain areas, which were not addressed previously have started showing positive benefits and results that too at a marginal investment.

We have built our subsidiaries in China, Malaysia, Brazil, Nigeria and Switzerland, and an associate plant in the USA. We find our footprints across the globe with a range of products finding application in all kind of industries throughout the world. Our products have installations in over 80 countries including South East-Asia, China, CIS countries, Indian subcontinent, West Asia, Middle East and Africa including South Africa & Australia as well as US and Japan.

**Indusfood-Tech: How do you see the investment opportunities and the business environment for the food processing industry in India?**

**VC:** The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year. In India, the food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry. Food processing industry in India contributes as much as 11% and 9% of GDP in agriculture and manufacturing sectors respectively. The industry is poised to have massive potential for elevating the agricultural economy, raising farmer incomes, generating employment and creating export earnings.

It accounts for about 32% of the country's total food market, and the Government of India has been instrumental in the growth and development of the food processing industry. The government through the Ministry of Food Processing Industries (MoFPI) is making all efforts to encourage investments in the business. It has approved proposals for joint ventures (JVs), foreign collaborations, industrial licenses, and 100% export-oriented units.

**Indusfood-Tech: How do you see Indusfood-Tech as a platform for the growth of the industry?**

**VC:** Indusfood-Tech being a platform that provides a global outreach to food processing machinery and equipment manufacturers, would offer a fair opportunity to get acquainted with the latest trends prevailing in the industry. Indusfood-Tech would combine synergies of the massive Indian food market and the latest technologies from across the globe to move towards an improved production.

Indusfood-Tech is not just a networking platform, but is also a forum to begin a dialogue for innovations and improve the industry.

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