

dry facts

...from BRY-AIR

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WISHING OUR READERS
A
HAPPY NEW YEAR



At Arctic India Sales, our horizon- 'the limit of mental perception' is ever expanding. As a pioneer in air technology, the company has always maintained a lead in bringing the most current technology to India. From dehumidification to specialised product drying of seeds, plastics, wood, flexible barrier preservation systems, solvent concentration and compressed air drying to the energy recovery systems in the industry, the group company under Pahwa Enterprises umbrella have many firsts to its credit. The company is now geared to expand its markets too; from industrial to the commercial segment. As world focus is shifting to providing a better indoor environment, the company is again at the forefront in educating and providing solutions to Indoor Air Quality through products like heat wheel and energy saving precondi- tioners for the commercial segment. We dedicate the year '96 to the growing HVAC market with these two new product introductions for the commercial segment.

As the country steps into another high growth year, we at Pahwa Enterprises look forward to continued support from our customers for a mutually beneficial year !!

Environmental Test Chambers

Arctic India Sales brings world class technology to India.

ACS or *Angelantoni Climatic System SPA* are experts in the field of environmental test chambers and stress screen systems. The name Angelantoni is synonymous with advanced cold technology in both research and industry.

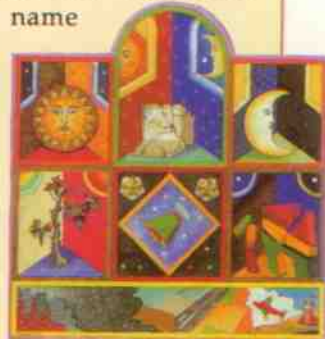


Located in Massa Martana (Perugia) in Italy, **ACS** has a wide marketing network in Europe.

The **ACS** product range - climatic chambers, test chambers, burn-in chambers, thermostatic chambers, to name just a few, find wide application in R & D centres, automobile industry, telecommunication, electronics, etc. **ACS** is well known in the world for specialized custom built chambers to suit customer needs.

Arctic India Sales, leaders in air engineering in India, was the ideal partner for **ACS** to market it's product in the country.

A brief outline of the **ACS** range is shown on Pg. 4



Meeting Ground for next Quarter

Comfex'96	Jan. 5-7 '96	Ahmedabad
Techex'96	Feb. 1-3 '96	Bombay
Comfex'96	Feb. 1-3 '96	Bangalore
Autoexpo'96	Feb. 21-27 '96	Delhi
Frigair'96	Mar. 6-8' 96	S. Africa

We invite you to a viewing of the range of products from Arctic India Sales, Bry-Air India, Delair India and Arctic India Engineering at the above exhibitions.

Did You Know ?

A billiard ball led to the birth of plastic ... ?

The modern Plastic industry began in the 1860's with a competition in America to find a better billiard ball. A price of \$10,000 was put up for anyone who could find a cheap replacement for ivory balls. The winner was John Wesley Hyatt, an American inventor, who made a ball from a substance he called Celluloid.

Uses of celluloid were quickly found - among them spectacle frames, knife handles, wind screens for early automobiles and photographic film. Without Celluloid the film industry could never have started.

Celluloid gave Leo Baekeland, an American industrial chemist, the idea to create the first completely synthetic material. He achieved success in 1907 by mixing phenol (carbolic acid) and the gas formaldehyde-producing a plastic he called Bakelite.



SUPER ACCURATE COLOURING

Dosers and Blenders are used for adding, mixing colouring agents, master batches and other additives to the resin material. Dosers feed the additives/colour at the throat of the hopper of the moulding machine/extruder at the preset feed rate.

Usually more than one doser can be mounted at the same hopper throat to add more ingredients.

In this case, a mixing chamber is provided for mixing of various components. Blenders assure thorough mixing of virgin material, regrind material, powder additives, fillers, colorants and master batches.



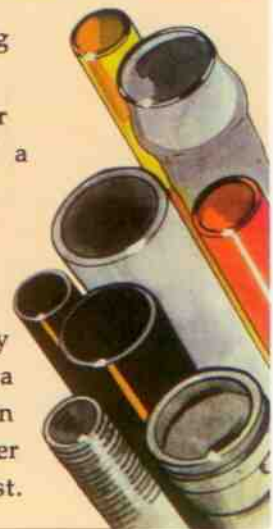
- Designed for accurate dosing to ensure high quality of finished product and consistently uniform colouring.
- Change-over from one material to another takes less than 2 minutes without interruption of production.
- Eliminates need for conventional mixing systems, reducing storage and manpower costs.
- Eliminates inventory of coloured material.



Bry-Air LVD helps to manufacture UV resistant HDPE pipes

UAC Pipes Sdn. Bhd., manufacturer of UV resistant HDPE pipes was facing problems in drying carbon black. The HDPE material is blended with carbon black to make the pipes UV resistant. Carbon black being highly hygroscopic did not dry completely when dried in hot air dryer (The conventional method of drying). The result was poor internal finish in the pipes. Defects like orange peel effect, bubbles, craters, due to improper drying led to

large scale rejection of material being extruded at a rate of 600 Kg./hr. UAC Pipes was able to solve their problem with the installation of a Bry-Air Large Volume Dehumidifying type Plastic Dryer - LVD-10 with an auto loader VLS-1500 along with drying hopper model H-400. The unique heat pipe based heat recovery system, 'built-in' the LVD allows a 30% reduction in the reactivation energy bill, thus allowing for a better quality finish at lower input cost.



WHEN MOISTURE IS TORTURE

In this column we will share with you regularly our experience on major application areas where usage of dehumidification is both extensive and essential.

Sugar + Moisture = Caking, Lumping, Hardening.

Refined Sugar : Problems during storage and packaging .



As we all know sugar is extremely hygroscopic, i.e. it absorbs moisture very quickly, creating innumerable operational problems during storage and packing.

Refined sugar is fed via belt conveyers to sugar bins or hoppers. At this point the sugar is at about 118°F with moisture content approximately 0.035% of its weight. This sugar, however, has to be cooled to about 100°F to 104°F before it can be packaged. If cooled by the conventional method, the cooling process takes about 12 hours during which condensation takes place on the bin ceiling. This results in lumping of the top layer and deterioration in quality.

Bry-Air, approached by a renowned sugar processor in Malaysia to solve this problem, offered a perfect solution : Blow cool dehumidified air into the bins at condition $79 \pm 1^\circ\text{F}$ and $30 \pm 2\%$ RH. This would not only take care of the moisture problem due to condensation but also reduce the cooling time to 6 hours, resulting in considerable saving of operating time, man hours and cost.

Bry-Air has many installations in sugar industry keeping moisture out of sugar.

Moisture affect Machines Adversely too

Most operations and instrumentation in sugar industry is pneumatically controlled. And to operate at peak efficiency clean, dry, compressed air is required. Compressed air cannot be used directly because it contains contaminants like dust, oil, moisture, etc. While filters may remove dust and oil, moisture can only be removed by using a compressed air dryer. Failure to remove moisture from compressed air used for instrumentation typically leads to problems like failure of electro-pneumatic signaling device, which in turn results in the valve to 'fail' and thus, the whole operation is disrupted.

Apart from problems like malfunctioning of instrumentation and control system, production loss due to break downs and increased maintenance costs, another harmful effect of moisture in compressed air, particularly in the sugar industry is, product contamination. Sugar, being a food product, if contaminated can have fatal effect. Thus, the importance of having clean, dry compressed air cannot be overlooked or ignored at any cost.

Another typical problem of sugar industry arises during the process of sulphur burning. Sulphur reacts with moisture to form sulphuric acid, which corrodes machinery, damaging them irreparably.

Delair, has countless compressed air dryers working in the sugar industry to provide moisture free, 'bone dry' compressed air for trouble free operation of instrumentation and tools and contamination free sugar.



THE ACS RANGE FROM ARCTIC INDIA SALES

ENVIRONMENTAL TEST CHAMBERS FOR R&D CENTERS, INDUSTRIES LIKE AUTOMOBILE ELECTRONICS, TELECOMMUNICATIONS.



Bench top chambers for tensile and compression tests



Floor chambers



Prefabricated temperature humidity walk-in chambers



Thermal shock chambers



Vacuum chambers

APART FROM A LARGE RANGE OF STANDARD CHAMBERS TO TEST DIFFERENT PARAMETER ACS HAS THE CAPABILITY TO PROVIDE



Space simulators



Lab and Industrial ovens



Vibration chambers



Environmental stress screening (ESS) chambers



Burn in systems

CUSTOM DESIGNED CHAMBERS FOR ANY GIVEN PARAMETER, TAILORED TO 'TEST' CONDITIONS. ONCE YOUR PRODUCT/COMPONENT



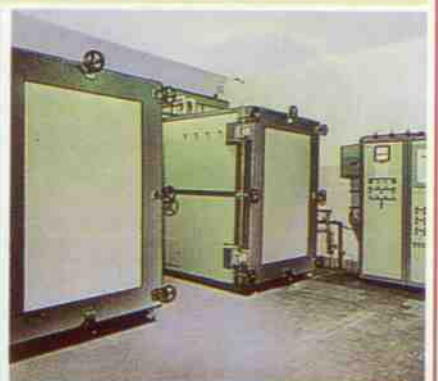
* Pressure Cookers * and non - saturating auto claves



Dry corrosion test chambers



Sand, dust, solar, rain chambers



Customs designed chambers

HAS BEEN TESTED IN THE ACS CHAMBER, YOU CAN GAURANTEE FAILURE-FREE OPERATIONS. WRITE IN FOR MORE DETAILS TODAY.

Bry-Air

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