

# Wet Facts™

Cool News from **ECO-COOL™**



A **PANWA** ENTERPRISE

**DRI™**  
Desiccant Rotors  
International

Other  
**PANWA™**  
Group Companies

**Bry-Air®**

**delair®**

*“Greetings for the season”! May 2010 bring a lot of success to you!*

Thank you for your support in our progress. Your continuous encouragement has driven us to pioneer green and clean technologies to provide you with the best in Energy Recovery and Indoor Air Quality (IAQ).

Year 2009 has been a very happening year for **DRI**. We opened offices in the USA and Philippines and have also set up a new manufacturing facility at Manesar. With these new openings, **DRI** now has its presence in all the continents across the world to address the needs of our customers for the certified products, high quality, fast delivery requirements and technical hand holding.

**Green Building is on everyone's mind**

## Optimising energy performance

**Green LOBBY**

**RAJ UMRAOPATI RAY**  
DECCAN CHRONICLE

**D**esiccant Rotors International (DRI) is an active participant in the green building movement worldwide,” says Varun Pahwa, Executive VP, DRI. There is no doubt that green technology development is the way forward in the future. Therefore it is but natural that DRI, which is the largest manufacturer of energy saving equipments in India — providing a complete line of desiccant-based products and systems that recover energy, increase ventilation and control humidity — be involved in energy recovery products and solutions that it provides to various corporates around the world.

“The company's 'Green' products help to optimise the energy performance of air-conditioning systems resulting in the considerable reduction of installed tonnage,

reduction in utility bills, enhanced indoor air quality and productivity and reduced health risks,” says Pahwa.

Apart from being a founding member of the Green Building Councils (GBC) in India and Vietnam, DRI is a member of the Green Building Councils in the USA, South Africa, Philippines and Australia. “The company is in the process of launching a new technology — DOAS (Dedicated Outdoor Air System) which is a unique combination of special rotors and a cooling coil. It would enable the delivery of conditioned fresh air all year round in a very energy efficient manner. With this new applied technology, the ‘HVAC’ industry will see a paradigm shift in the understanding of indoor environment quality concerns,” says Pahwa.



**Varun's focus on Green Building initiatives**  
**DRI: Energy Saving Solution for Commercial Buildings**

**Varun Pahwa, Executive Vice President, DRI on the Young Turks Transformer CNBC TV18**

**The Indian EXPRESS** 7

Varun does his bit for the green revolution

SHREEVA BHADIA

**T**HE fight's been on for a while, but it's now that it has become an individual concern, with people waking up to the grave concern of limited resources, ecological imbalance and the need to go green. Even if it is in the form of small adjustments. “Even switching off lights when not required for a long time, saving water, they are now doing it all,” Varun Pahwa, Executive VP, Desiccant Rotors International Pvt. Ltd (DRI) says the change in figures and tell us that from one building in 2001 to 200 gross buildings, with 150 million sq ft registered for certification currently, India has come a long way. “This, particularly with annual

associated in bringing the Green Revolution in Infrastructure space. The big thing that of green building, ventilation and air conditioning systems (HVAC). Green equipment now holds a strong presence in the revolution, a fact that is acknowledged by Green Building Councils (GBC) in India and Vietnam, of which the company is a founder member. “The air-conditioning equipment helps improve the indoor air quality, which in turn is 10 per cent more polluted than the air outside, and can lead to sick building syndrome, reduces productivity and affects health,” Pahwa says that along with bringing in healthy air, they have designed the equipment in a way that it uses less power. “This, because we realise that use of power saving equipments can reduce the total power consumption of a building by at least 12 per cent,” he adds and that this statement has got India to a level that it now has the third largest footprint of green buildings in the world. “Sounds good!”

**On the eco trail**

2,000 gross buildings expected to come up by 2012 and the overall annual investment towards urban green building construction around US\$ 1,000 million,” adds Pahwa, who has joined and Ray industries

## **DRI™** launches India's first DOAS

At **DRI**, innovation is believed to be the key to growth. **DRI** has established a worldwide reputation for clean technology innovations. Keeping with this philosophy, **DRI** has launched an array of new products in Fresh Air HVAC Systems. One of such evolutionary new technologies is India's first DOAS (Dedicated Outdoor Air System). This system can assist in scoring substantial LEED points for green buildings.



Displayed at **ACREX**  
INDIA 2010  
17-20 Feb., 2010 Mumbai



Cooling product for industrial & commercial bldgs on Dec 18, 2009

DRI (Desiccant Rotors International) launched its new Arctic Coolers for cooling of industrial and commercial buildings. DRI Arctic Coolers use the EcoCool Evaporative Cooling Pads which are highly efficient, consistent in performance over a very long life, self-supporting, highly absorbent and can be easily cleaned, said a company statement.

They allow higher cooling with lower air volume and are over 80% efficient and also provide a 90% reduction in energy as compared to a conventional air conditioning unit. Speaking about the product Mr. Varun Patwa, Executive VP, DRI says "With the electricity prices and building's power consumption continuing to rise, energy costs are getting increased and this makes it extremely important for industrial and commercial buildings to select the right cooling option which provides best cooling at the most reasonable price. DRI Arctic Coolers provide this benefit along with being an environmentally safe solution".

These coolers are capable of lowering the fresh air temperature by 7-12 degrees. They allow cool fresh air to circulate throughout a building, forcing the stale hot air to be displaced out. Unlike air-conditioning which operates with re-circulated air, Arctic coolers operate on the principle of air change and work as part of balanced ventilation system, the company said.

Benefits of Arctic Coolers: (according to DRI):

A reduction in temperature in the work place creates the obvious benefits of improved staff morale, increased productivity and a reduction in absenteeism; evaporative cooling can provide additional benefits-

No negative impact on the environment

Eliminates odours and stale air instead of re-circulating them.

Money saving - running costs up to 90% less than an air conditioning system

Doors and windows can remain open with no detrimental effect on the efficiency or operating cost.

Provides a natural environment and improves air quality

Ideal for:

- Commercial Facilities like Office Complexes
- Manufacturing Facilities
- Workshops

# DRI EcoCool™ Pads – Cool Large Areas Economically







## DRI Customizes Indoor Weather for Jain Irrigation Systems



Jain Irrigation Systems, the winner of 4 International, 115 National and 31 State level awards for their outstanding performance and superior quality is known for selecting leaders when it comes to facility management. They trust **DRI EcoCool Pads** for humidification while storing their select range of ripened fruits and maintaining their color, taste, flavor and aroma so that they make Farm Fresh products for their customers.

**DRI** is a leader in evaporative cooling and manufactures evaporative cooling pads made from cross-sectional, cross-fluted specially treated media in India on a sophisticated and fully automated state of the art production line based at Bhiwadi.

**DRI EcoCool** Evaporative cooling pads have :

-  Higher cooling efficiency with lower air volumes
-  Very rigid structure which prevents sagging
-  Higher wet ability for better cooling
-  Superior design allows higher air flow and prevents clogging
-  Anti-rot treated for long life
-  Very economical as compared to imported pads



## DRI EcoCool™ Pads provide 100% Fresh Air at Cine Planet



**DRI EcoCool** pads help **Cine Planet Cinema Hall** to lower their space humidity, reduce energy costs all while keeping their patron happy and comfortable.

The **EcoCool** pads serve a variety of industries that require a reliable fresh air supply in confined spaces for process cooling, equipment cooling and people cooling to increase comfort, safety and improve profits. They are installed at Cine Planet Cinema Hall and give 100% satisfaction to the staff and the movie watchers. Theaters present a unique challenge when it comes to providing proper ventilation as part of a building's heating and cooling (HVAC) system. **DRI EcoCool** Pads provide an economical solution by maintaining proper humidity and pressure control at very low energy costs.

Kompally is one of the fast growing suburbs in Hyderabad today with various well-recognized landmarks. Cine Planet – 3rd multiplex of Hyderabad is one of the major landmark that joined the list since its launch.

This multiplex has three operating screens. The seating capacity varies at all the screens ranging from 428 viewers on one screen to 801 viewers on the other screen. The Cinema Hall is fully equipped with all modern amenities and presents a full entertainment package to the visitors with such facilities as a Food Court, Gaming Zone and the Shopping Outlets.

**DRI EcoCool** pads are enhancing the comfort of movie viewers at each of the three Screens.



DRI, largest manufacturer of energy saving equipment in India, has achieved a distinction by participating in Green Build (USA) for the first time ahead of any other Indian company. Green Build is the most important show on green buildings held every year in the USA. DRI has always been an avid supporter of the green building movement in India and world-wide.

In line with its commitment to green buildings, DRI participates in all major shows which promote the green buildings concept globally and is also an founder member of the Indian Green Building Council (IGBC), South Africa GBC (GBCSA), Vietnam Green Building Council (VGBGC) and a member of, Green Building Councils in US, Philippines & Australia.

DRI USA team was extremely excited on exhibiting their products during the show. Charlie Waddell, General Manager - DRI Inc. stated "I found this year's show very interesting. I realized that many people in executive decision making positions had no clue what energy recovery was and how to apply it. We received many enquiries which can be converted into orders at a future date."

The team educated the visitors as to how they can achieve substantial LEED points by using DRI energy recovery products. DRI's energy recovery products reduce building energy consumption by 10-15% if installed as a part of the buildings' HVAC systems.

The company has strengthened its leadership position across the industry through the launch of its evolutionary technology - India's first DOAS (Dedicated Outdoor Air System), the ULTIMA Series in India and the UAE market. The ULTIMA series signify a sea-change in the prevailing scenario of reduced carbon credits not only in our country, but also in several other countries.

ULTIMA is a highly energy efficient ventilation system designed to deliver conditioned fresh air. The fresh air is delivered at lower dew points and desired temperatures enabling decoupling of control of internal building loads and external loads.

For green buildings, this system can assist in scoring substantial LEED points in conjunction with systems like chilled beams.

The benefits of **EcoCool** pads are as follows:

- ◆ Long life time
- ◆ Lower operating costs
- ◆ Low scaling
- ◆ High water retention
- ◆ Quick and easy to install
- ◆ Environment friendly
- ◆ Consistent high quality
- ◆ Maximum cooling efficiency
- ◆ Available in customized sizes
- ◆ Glued with superior quality glue
- ◆ Superb wetting properties
- ◆ Strong and self supporting



## DRI EcoCool Pads Maintain Conductive Temperature in suguna Poultry

DRI EcoCool pads help Suguna poultry. The largest poultry enterprise of India. Suguna ranks among the top ten poultry companies world-wide and has over Rs. 2,000 Crore turnover.

A very iconic firm with energy efficient elements has been evolved to express the dynamic work culture of the company. Company Building adheres to ECBC and has 100% power backup. Access control systems, evaporative cooling systems and occupancy sensors.

Suguna's drive to creating nutrition enriched products goes from taking proper care of every small thing. Their quest for superior quality led them to choose DRI EcoCool Pads, the superior alternative over imported pads.

The EcoCool Evaporative Cooling Pads (ECP), made of cellulose paper is engineered from cross-sectional specially treated flate media capable of absorbing and retaining water to provide the maximum cooling efficiencies. The cellulose media is treated with stiffening and rot-resisting agents to increase its useful life. The geometry of the cellulose media provides cooling without any water carryover as long as the air velocity through the pads is less than the recommended maximum.

The ECP media is treated with anti-rot and rigidity resins. The media is cross-corrugated to maximize the mixing of air and water. Saturation effectiveness ranging from 50% to 98% can be achieved depending upon air velocity and depth of the cooling pad.

- DRI EcoCool Pads** are ideal for:
- Poultry farms, hatcheries, brooding areas, livestock and dairy farms
  - Green houses, mushroom farming, agritech and floriculture.
  - Commercial and industrial areas.
- DRI EcoCool Pads** are exported to Europe, Australia, Middle East and USA. There are available in standard and customized sizes.





**DRI™ ARCTIC COOLERS**

with



## A reliable fresh air supply in confined spaces for

**Process Cooling**
**Equipment Cooling**
**Personnel Cooling**  
**to increase safety and improve production.**

**DRI Arctic Coolers** produce effective cooling by combining a natural process - water evaporation with a simple, reliable air moving system. Fresh outside air, filtered through the saturated evaporative media, is cooled by evaporation and circulated by a suitable sized blower. Adequately designed, such cooling lowers the fresh air temperature by 7-12°C e.g., the air-off temperature from the evaporative cooler for an outside temperature of 43°C can be as low as 28-30°C.

While using an evaporative cooler to keep the hot air in your facility out, leave a window or door cracked open. This allows new cooled air in and warmer air to escape. This also means that stale air escapes the place. Air-conditioners are closed systems, i.e. they use the air from inside your place over and over again while an evaporative cooler constantly draws in fresh air from outside.

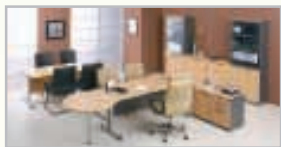
### How heat affects your company's bottom line . . .

- ◆ Work output drops
- ◆ Production drops off
- ◆ Product Quality drops

- ◆ Company profitability decreases
- ◆ Increased downtime
- ◆ Reduced profit margins
- ◆ Increased accidents
- ◆ With accidents - increased insurance rates

### Advantages with DRI Arctic Coolers:

- Precise temperature control
- Humidity control
- Vibration free
- Low maintenance
- Silent
- CFC free, no "green house" effect
- Operational in high ambient temperatures
- Comfortable habitation and working environment
- Improved Indoor Air Quality
- Higher productivity
- Lower absenteeism
- Lower operating costs (approx. one tenth of the air-conditioning cost)



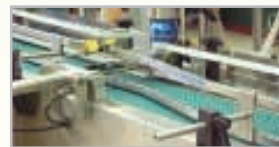
Office



Green House



Textile Industry



Manufacturing Unit



Paper Mill

**Manufactured & Marketed by :**

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