



# DRI SYSTEMS

- Energy Recovery Ventilators
- Treated Fresh Air Units
- Dedicated Outdoor Air Systems
- Custom Air Handling Units
- Central Air Purification Systems
- Hygiene Air Handling Units
- Direct/Ducted Evaporative Coolers
- Indirect Evaporative Coolers
- Active Chilled Beams



DRI Air Handling Unit (DAHU) range is



We at **PAWA GROUP** have been serving HVAC&R industry for more than 60 Years through our Flagship Companies **Bry-Air** & **DRI**.

The focus is on the technologies which benefits all the Stakeholders including our Clients/End Users, Consultants, Contractors and Partners towards a Sustainable Green Environment. DRI provides Innovative Air solutions for air treatment & Green Buildings. A full range of standard & custom air handling units are available. Given the range of our products & technology, DRI is the only truly custom AHU Company in Asia. A fast growing HVAC&R company with a global footprint, DRI is also a global provider of components for Energy Recovery, Indoor Air Quality (IAQ) & Fresh Air Treatment.

**DRI** Evaporative Cooling Solutions are available under **ARCTIC** brand, to help cool large areas economically.

## Over 700,000 square feet of state of the art manufacturing facilities



Corporate Office, Gurugram



Gurugram (1)



Gurugram (2)



Manesar (1)



Manesar (2)



Bhiwadi

## World-class R&D and Testing Facilities



**ECOFRESH**<sup>TM</sup>  
Energy Recovery  
Wheels



**ECG DRY**<sup>TM</sup>  
Desiccant Dehumidifying  
Rotors & Cassettes



**ECG SCRUB**<sup>TM</sup>  
Gas Phase  
Filtration



**ECG BEAM**<sup>TM</sup>  
Active  
Chilled Beams

# Our Products are at the heart of all our Systems

## Energy Recovery Wheels



## Desiccant Dehumidifying Rotors & Cassettes



## Evaporative Cooling Pads



## Gas Phase Filters



## Products Certifications



### Heat Recovery Wheels

HRW Model:

MS - 200

MS - 270A



- Heat Recovery Wheels
- Desiccant Dehumidification Cassettes



### Energy Recovery Ventilators



### Honeycomb Chemical Filter



### Heat Recovery Wheels

HRW Model:

F1 200 Series,  
F2 200 Series

Sensible:

EC - 100, 200, 270  
EZ - 100, 200, 270  
EH - 100, 200, 270



- Heat Recovery Wheels
- Desiccant Dehumidification Cassettes
- Evaporative Cooling Pads



### Desiccant Dehumidification Rotors



### Heat Recovery Wheels



### Quality Management System



### Environmental Management System



# All DRI Air Handling Units (AHUs) are certified as per AHRI standard 1350

AHRI standard 1350 Certified



## Rating of Central Station Air-handling Unit Casing

**Table 1. Casing Deflection Rating Class**

Class Deflection, $CD_x$	Rating Differential Static Pressure, in $H_2O$	Maximum Normalized Deflection, in/in of Span
$CD_1$	10	0.0033(1/300)
$CD_2$	8	0.0042(1/240)
$CD_3$	6	0.0042(1/240)
$CD_4$	4	0.0042(1/240)
$CD_5$	1	$\geq 0.0042(1/240)$

**Table 2. Casing Air Leakage Rating Class**

Class-Leakage, $CL_x$	Maximum Casing Air Leakage Rate, $CL_r$ , cfm/100 $ft^2$ (at $Pr=1$ in $H_2O$ )
$CL_1$	1
$CL_2$	2
$CL_3$	3
$CL_6$	6
$CL_{12}$	12
$CL_{24}$	24
$CL_{100}$	100

**Table 3. Casing Thermal Transmittance Rating Class**

Class-Thermal Transmittance, $Ct_x$	Thermal Transmittance without Leakage (U), Btu/hr/ft $^2$ /°F	Thermal Transmittance with Leakage (U), Btu/hr/ft $^2$ /°F
$CT_1$	$U \leq 0.14$	$U \leq 0.16$
$CT_2$	$0.14 > U \geq 0.23$	$0.16 > U \geq 0.26$
$CT_3$	$0.23 > U \geq 0.36$	$0.26 > U \geq 0.39$
$CT_4$	$0.36 > U \geq 0.55$	$0.39 > U \geq 0.61$
$Ct_5$	$U > 0.55$	$U > 0.61$

**Table 4. Casing Thermal Bridging Rating Class**

Class - Thermal Bridging, $CB_x$	Thermal Bridging Factor, kb
$CB_0$	$kb \geq 0.8$
$CB_1$	$kb \geq 0.8$
$CB_2$	$0.8 > kb \geq 0.60$
$CB_3$	$0.60 > kb \geq 0.40$
$CB_4$	$0.40 > kb \geq 0.20$
$CB_5$	$kb < 0.20$

## DRI Air Handling Unit (DAHU)

DAHU Range: 1700 CMH – 60000 CMH



# Our Systems Portfolio



Chilled Beams



Energy Recovery Ventilators



Treated Fresh Air Units



Dedicated Outdoor Air Systems



Dedicated Outdoor Air Systems with Refrigeration on Board



Air Purification Systems



Hygiene Air Handling Units



Kitchen Exhaust Unit

## Evaporative Cooling Systems



Portable



Spot/Free Flow



Ducted



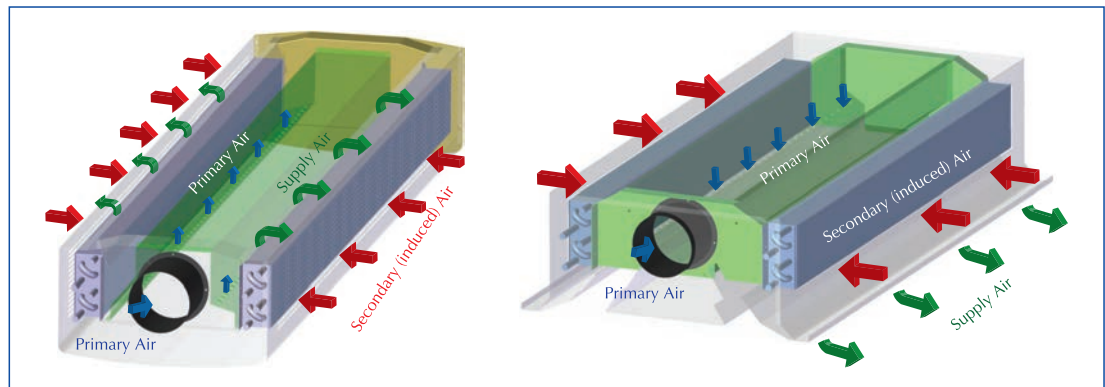
Indirect-Direct (2/3 Stage)

## EcoBeam Chilled Beams

*EcoBeam Chilled Beams* are room air recirculation devices, which are used to cool and ventilate spaces wherein user comfort and good indoor air quality is desired and valued; typically in commercial office spaces, hospital patient rooms, hotel rooms, classrooms and laboratories. Chilled beams also supplement the flexible use of available space, and are used where the primary air is dehumidified.

DRI's range of EcoBeam have a higher induction ratio and, therefore, the primary air volume is reduced and the supply air needs to be dehumidified to become dry enough to carry out all internal moisture loads. When paired with the DOAS, the chilled beam system ensures reliable and energy efficient system operation.

### Working Principle



## Applications

Chilled beams can be used in buildings where outdoor air is treated (dehumidified) before supplying it into spaces and infiltration of outdoor air is in control. Also the internal moisture (latent) loads need to be at moderate primary air volume sufficient to avoid condensation. Therefore, the typical applications are:

### Commercial Office Buildings



### Schools



### Hospital Patient Rooms



### Hotel Rooms



### Laboratories





# **DRI<sup>®</sup> ECOBEAM**

## CHILLED BEAMS

### **Silent Air Conditioning**



**ECB-C-601 Concealed**



**ECB-C-602 Concealed**



**ECB-C-603 Concealed**



**ECB-C-604 Concealed**



**ECB-C-605 Concealed**



**ECB-C-151 Concealed**



**ECB-E-301 Exposed**



**ECB-E-451 Exposed**



**ECB-E-452 Exposed**

## **Multi-Service ECOBEAM**

### **EcoBeam ECB-M-451**

#### **Exposed multi-service chilled beam**

- Multi-service unit with various options available
- High cooling capacity with low primary air volume
- 2-way discharge towards the surface above the unit
- Exposed installation, min. 100mm free space required above the unit
- End connection of air duct and pipes
- Condensation collection trays
- Various perforation options available



**LED-light, smoke detector, daylight & occupancy sensor, PA speaker**





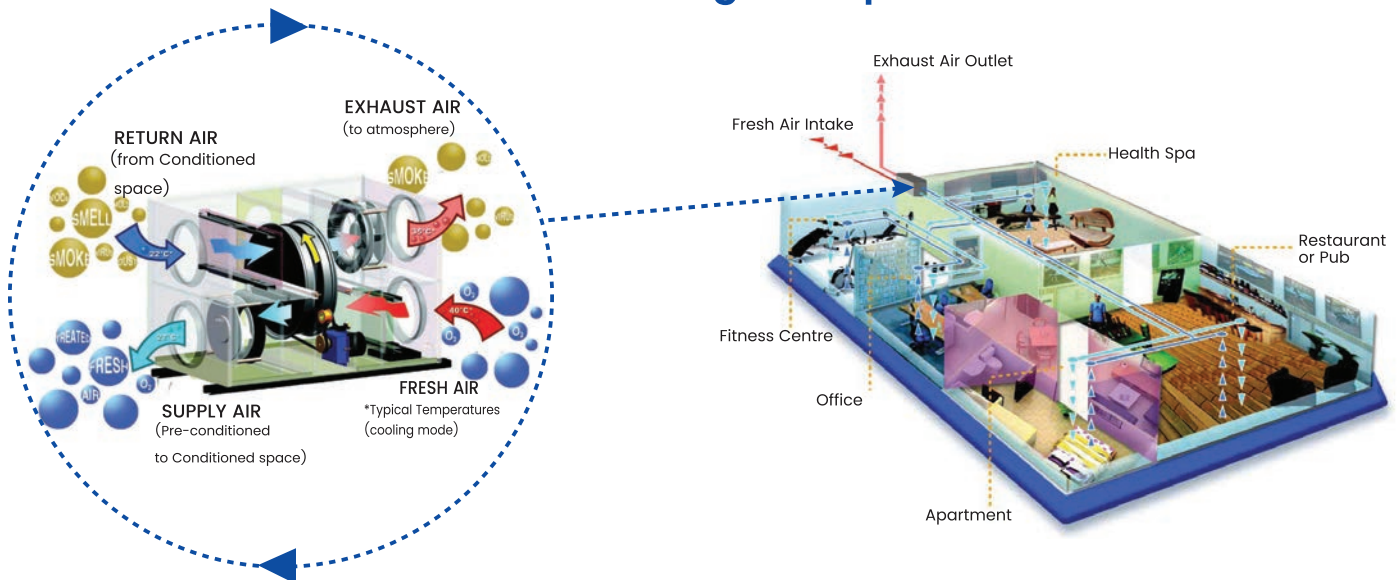
## Energy Recovery Ventilators with

Only air-conditioning is not enough,  
you need fresh air for healthy environment



**DRI ERVi** adds pre-cooled fresh air to conditioned spaces without the need to increase tonnage of existing AC. It ensures that you get the right air quality as per international and domestic norms used the world over in offices, condominiums, hotels, hospitals, auditoriums, multiplexes, schools, healthcare centers, pharma industry, etc.

### ERV Working Principle



Unlike ERV most split, vrv and vrf air-conditioners, only recycle and cool stale indoor air

## ERV Models ERV 80/100i – ERV 3000i



ERV – 150i



ERV – 500i



ERV – 800i



ERV – 1000i



ERV – 2000i



ERV – 3000i

Selection software available

DRI ERV<sub>i</sub> is the first choice of an HVAC engineer and architect as it provides triple advantage of:

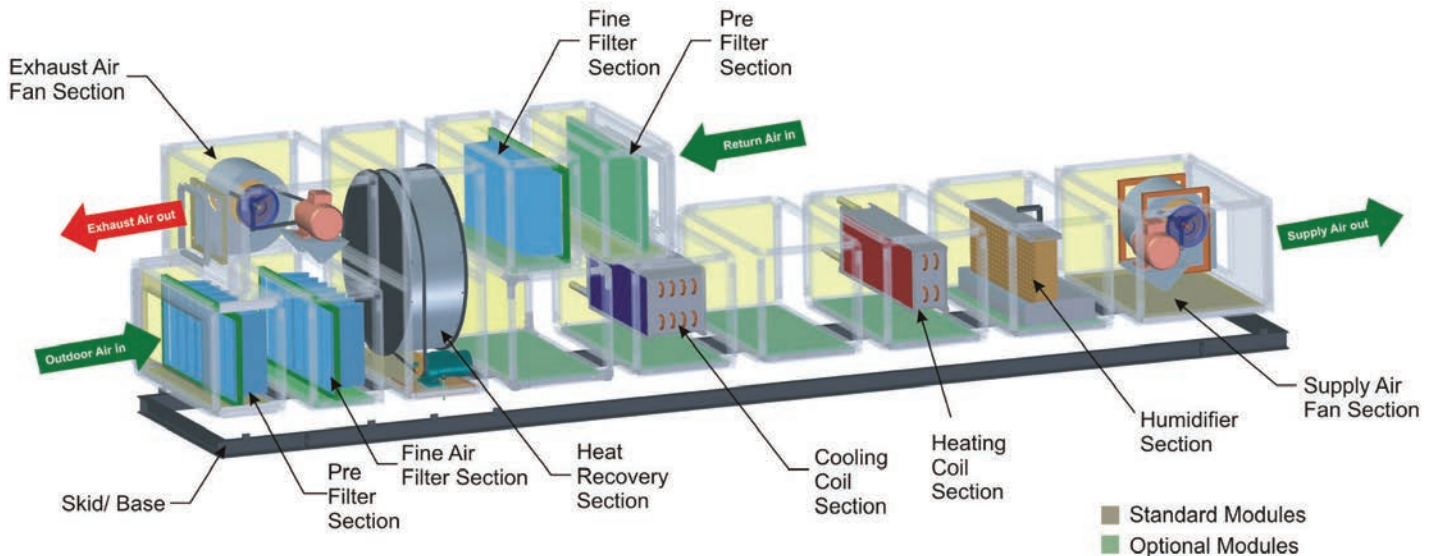
**Better IAQ • Energy Saving • Humidity Control**

# FLEXAIR™

## TFAs Series

### The Next Generation of Fresh Air Units

#### Operating Mechanism



The new **FlexAir** Treated Fresh Air Units with **Ecofresh** Molecular Sieve Coated Heat Wheel inside provides a complete solution for IAQ and Energy Saving in a single unit, with the option to add modules for cooling, heating, humidification, high efficiency filtration, mixing, sound attenuation, etc.

### Benefits of EcoFresh beyond payback and enhanced energy saving

- Almost no cross-contamination, specially, the adjustable purge section rules out the cross-contamination of the air stream (less than .04%)
- Over 80% energy recovery both latent and sensible. Ideal for tropical climates where latent loads are 2-3 times the sensible load
- Special labyrinth sealing arrangement ensure no cross leakage of air stream between the supply and exhaust section
- Most advanced technology & Certified/Tested in international labs
- Wheel edges hardened to suit marine/coastal application needs
- Best LCC (Life Cycle Cost)



### Why FLEXAIR™

- Ensures good IAQ
- Reduced Aircon and thus, saves energy costs
- Helps qualify for LEED Certification



# **FLEXAIR™**

## **TFAs Series**

**Ensures good IAQ in Hotels, Auditoriums, Multiplexes and other large air-conditioned spaces !**

**FlexAir TFAs** are perfect for cold and dry climates as well as hot and humid climates. FlexAir TFAs help to maintain IAQ and humidity in conditioned sectors like :

- **Hospitality:** Hotels, Restaurants, Pubs, Bars, Discotheques
- **Healthcare:** Hospitals, Nursing Homes, Operation Theatres, Nurseries, Burn Wards
- **Commercial Areas:** Supermarkets, Departmental Stores, Office Buildings, Conference Facility
- **Educational & Recreational Areas:** Schools, Auditoriums, Bowling alleys
- All other conditioned spaces
- Ideal for: Healthcare & Pharmaceutical Industry

Selection software available

### **Custom Engineered TFA Units**



**Bahrain**



**Kenya**



**UAE**



**Bangladesh**



**India**

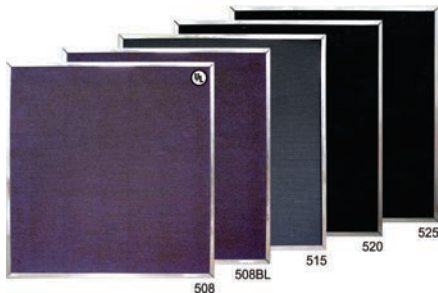


**India**



## Central Air Purification Systems

### Enhance IAQ Protect yourself against pollution



**DRISORB™ Series**  
Honeycomb Chemical Filters



**BRYSORB™ Series**  
Granular Media

- Dilutes / flushes out indoor pollutants using clean outside air and further prevents infiltration by positively pressurizing the area
- Outside air, proper particulate and chemical filtration is required before the air is introduced into the space

## Acceptable levels

Particulate matter (PM <sub>2.5</sub> )	24 h mean < 25 µg/m <sup>3</sup>	WHO Air Quality Guideline
Particulate matter (PM <sub>10</sub> )	24 h mean < 50 µg/m <sup>3</sup>	WHO Air Quality Guideline
Carbon dioxide (CO <sub>2</sub> )	< 1000 ppm	ASHRAE 62.1-2013
Sulphur dioxide (SO <sub>2</sub> )	24 h mean < 20 µg/m <sup>3</sup>	WHO Air Quality Guideline
Nitrogen dioxide (NO <sub>2</sub> )	1 h mean < 200 µg/m <sup>3</sup>	WHO Air Quality Guideline
Ozone (O <sub>3</sub> ) 8 h mean	< 100 µg/m <sup>3</sup>	WHO Air Quality Guideline
Carbon monoxide (CO)	8 h mean < 75 ppm	ASHRAE 62.1-2013
Formaldehyde	< 0.1 mg/m <sup>3</sup>	ASHRAE 62.1-2013

## APS Models



FAPS-500V



FAPS-1500U



FAPS-2000H



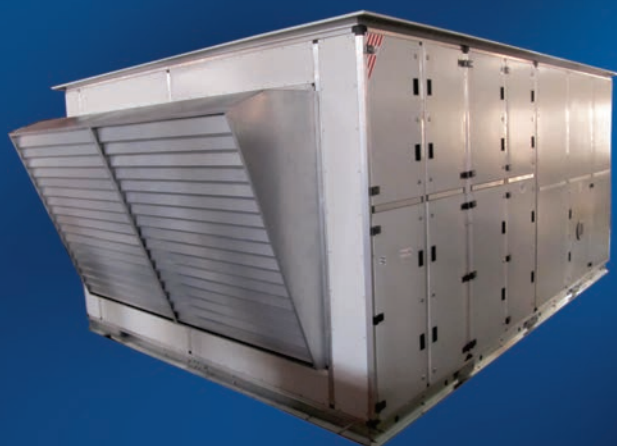
FAPS-2000U



FAPS-2000V



FAPS-4200V



FAPS-1700



FAPS-6000

Enhance IAQ with  
Healthy Life



Residences



Classrooms



Offices



Hotels



Embassy





## Dedicated Outdoor Air Systems

World's Largest Range of DOAS with advanced Controls, Sensors and Connectivity

Ideal for the "Moisture Centric" tropical countries

Achieves both RH control and energy recovery


### **ULTIMA**

- Designed to supply air at low dew point using chilled water coil
- Ultimate for the Moisture Centric tropical Countries Achieves both RH Controls & Energy recovery
- Uses unique passive dehumidification wheel for extra dehumidification



### **ZENITH**

- Possibility of obtaining substantial lead points
- Good RH control in all the seasons
- Reduced installed tonnage & lower power consumption of HVAC system
- Uses Sensible heat exchanger for reheat & increasing energy recovery

 **SMART EMS** Energy Management System is an intelligent controller with imbedded logic which modulates various components, air flows and rotor speed, based on inputs from dual and other in built sensors, for varying outside air parameter / conditions.

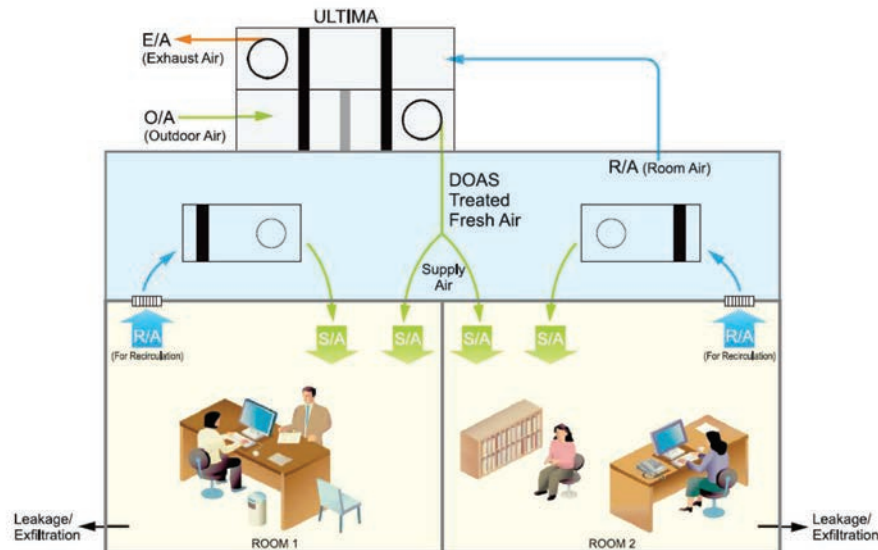
- Fully automatic micro processor controlled operation
- In built Demand Control Ventilation (DCV) option
- In built Dual sensors
- Can be connected with the Building management System (BMS) through suitable communication protocol



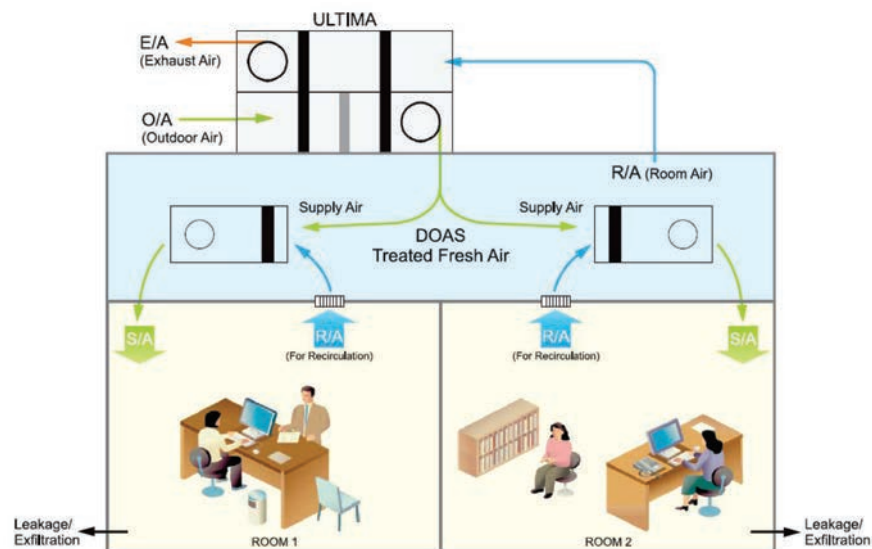
## Dedicated Outdoor Air Systems

### Installation Options:

#### **DRI DOAS** in Parallel with Terminal Equipment



#### **DRI DOAS** in series with terminal equipment



### Ideal for:



Office Spaces/IT Offices



Hotels/Hospitality



Hospitals/Health  
Care Facilities



Commercial Spaces/Malls

### Substantial Green Building LEED Points for

Energy saving (55%) approx • Improved IEQ\* • Innovative new technology

\*IEQ: Indoor Environmental Quality



## with Refrigeration on Board

### DRI HEXAIR – R series Fresh Air Package Unit

- Integrated with cooling units, helps free up space, simplifies installation, reduces operating cost & minimizes capital cost
- Gives you the ability to deliver cool and dehumidified air after energy recovery, cools using an onboard condensing unit independent of any chiller/chilled water supply or external condensing unit/VRF unit
- Delivered fresh air is closer to the room temperature in a neutral condition



### Power of Six

- **Improved** Indoor Air Quality
- **Effective** Humidity Management
- **Proper** Space Utilisation
- **Highest** Moisture Removal Efficiency (MRE)
- **Free Reheat**
- **Utilises** Waste Heat for Regeneration

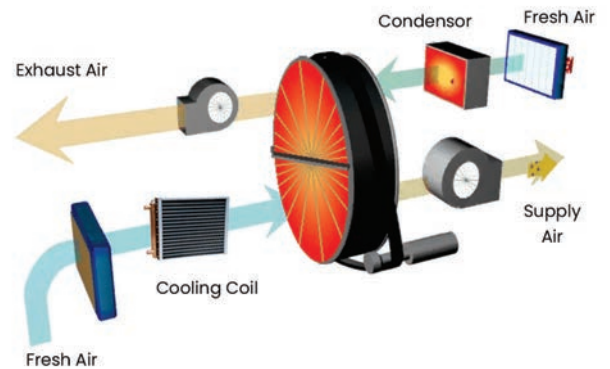


## with Refrigeration on Board

### DRI HEXAIR – MR series

\* with active desiccant wheel and condenser heat regeneration

- **HEXAIR – MR** integrates desiccant dehumidification, cooling unit and energy recovery to maintain RH in conditioned spaces
- The system also utilizes waste heat to regenerate specially customized desiccant wheel series thereby increasing the moisture removal capacity
- The unit provides space neutral leaving temperature and low dew point to take care of room latent internal loads
- Dehumidification is at no extra energy cost, as it uses waste heat of condenser coil to regenerate the desiccant wheel
- The system is most energy efficient as it eliminates the need for energy guzzling over cooling and reheating. It works with a 100% outdoor air or can work on partial outdoor and re-circulation air





## Custom Engineered DOAS Units

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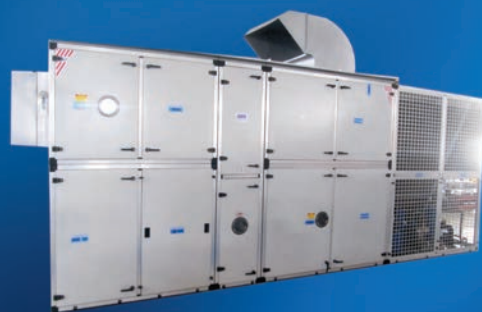
India



Malaysia



India



Indonesia



Malaysia



Malaysia

# Hygiene Air Handling Units for

## Health Care, Operation Theater & Pharmaceuticals Facilities

Only routine microbiological monitoring is not enough, every hospital should have given proper attention to airconditioning, ventilation & filtration system to keep the air environment clean & safe for patients. The role of HVAC is further very challenging in ultra-clean Operation Theatres, used for procedures such as Organ Transplant, Orthopaedic Surgery, Neurosurgery, etc. where bacterial contamination is relatively more critical.

### Solution

- DRI OT AHU's provides guaranteed safe in-viornment in the OT. Its fulfills the parameter of NAHB guidelines and provides clean air & a safe environment
- DRI OT AHU ensures the right air quality as per international standards used the world over, It recovers energy from exhaust air, resulting in a considerable reduction in installed tonnage and utility bills. They also assist in enhancing the Indoor Air Quality (IAQ), maintaining desired temperature and humidity, and increased productivity

### Components:

- Energy Recovery
- Cooling Section
- Heating Section
- Humidification Section
- Controls & Sensors
- Humidity Control



### Controls

On board/remote, following functions are available

- Temperature Control
- Humidity Control
- VFD (for Constant Air Volume)
- Controls on Board like: Weekly schedule/night mode
- Electrical boards: The electrical board is fitted with a mains supply switch and has all the components necessary for the full functioning of unit without trouble
- Variable frequency driven fans
- Control Panel: The electrical board supplied with the OT AHUs air-conditioners provide necessary isolation against harmonic and electromagnetic disturbance. It is manufactured to comply with all the protections required by the current standards

### Options:

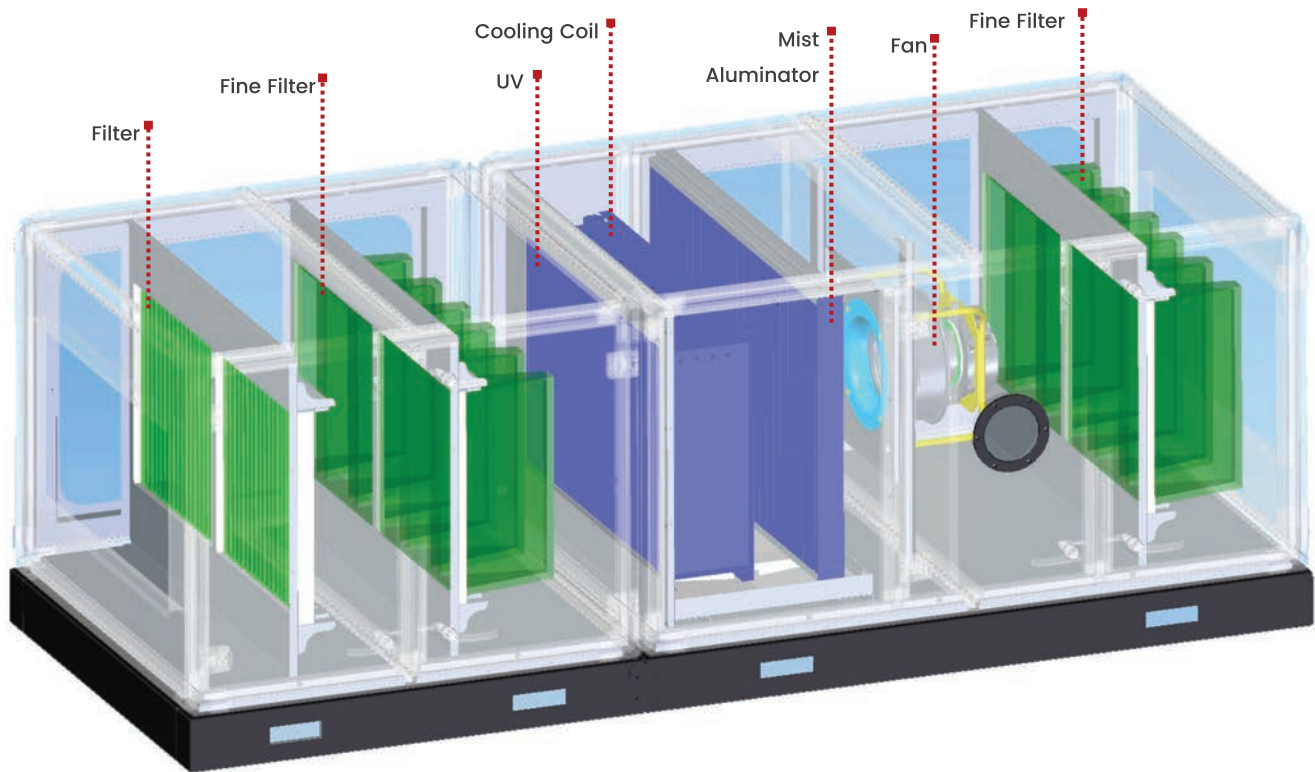
- Stainless Steel Casing
- UV Light Section
- VFD
- Hepa Filter
- Refrigeration on Board Condensing Unit)



# **DRI<sup>®</sup> FLEXAIR<sup>™</sup>**

## **Air Handling Unit (DAHU)**

DRI Air Handling Unit systems are designed to ensure excellent Indoor Air Quality, effective Humidity Control, and maximum Energy Savings.



- **New Modular Design:** DAHU series air handling units are manufactured in modular sections. Units are normally shipped with each section fully assembled in the factory. The unit is however designed to be supplied in knockdown arrangement for quick site assembly, where shipping or plant room restrictions demand.
- **Highly Reliable Operation:** Assured problem free operations even under tough circumstances as a result of solid construction with tight sealing between supply and exhaust air ensures minimal leakage.
- **Space Saving Design:** Compact design integrating all components in a single unit.
- **Best Technology in Casing Manufacturing:** The DAHU is manufactured in accordance with the best technology incasing manufacturing. With 0.8 mm sheet on inside and out side, the design is very sturdy and results in better lower leakage class.
- **Uniquely Designed Connection system:** The unique design makes it possible for the assembler to choose from two different ways of connection when he assembles the unit in the machine room in concealed PG joints and flange connections with strips.
- **Insulation Material and Wall Construction:** Double skin construction is provided by “sandwich” type 45/50mm THK panels comprising 0.8mm thick outer PPGI steel sheet, inner 0.8mm Galvanized steel sheet and polyurethane foam insulation with 40kg/m<sup>3</sup> density, providing a thermal conductivity coefficient of 0.0213W/m-k.

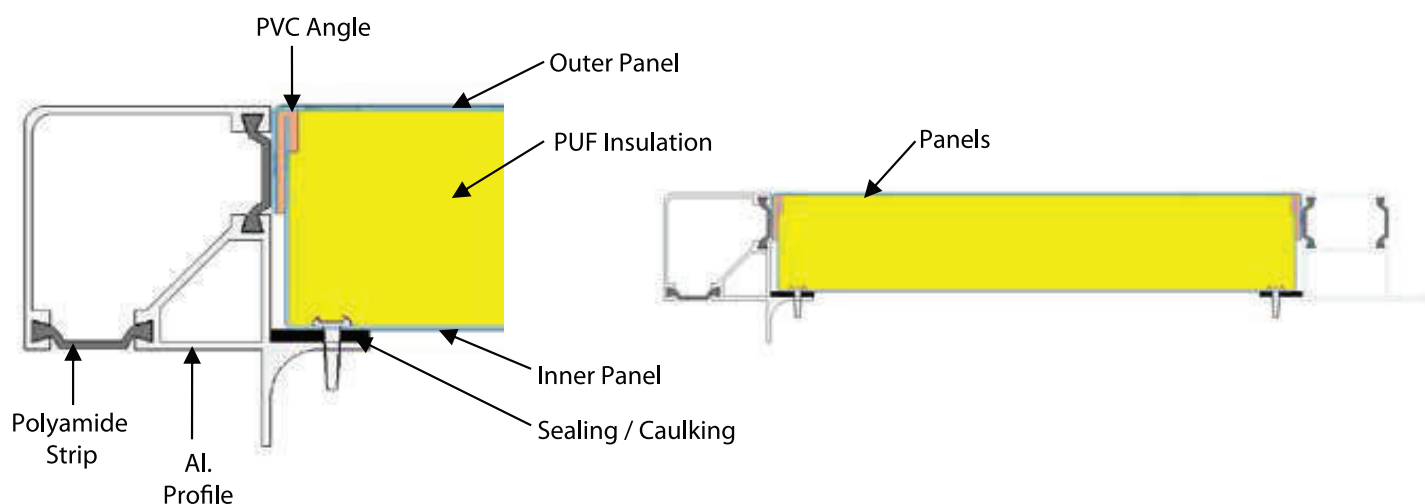
- **High quality standardised filters:** Deep folded bag filters with big filter areas and good sealing. The good tightness ensure clean air supply to the room is of high quality. Tool free access for easy cleaning.
- **Very low pressure drops:** All functions like coils, heat exchangers etc. are optimised to give lowest possible pressure drop in proportion to highest possible efficiency resulting in very low LCC.
- **Easy to maintain fan assembly:** Tool free access to fan assembly. Fan assembly slides out for servicing with a quick disconnect system. Saves time and money ! Reliable solid transmission construction saves belts and bearing.
- **Time tested reliability:** The DAHU is the manifestation of DRI's experience in the field of air handling technology and over 200 man years of R&D and experience in manufacturing the world class Energy Recovery Wheels.
- **Designed as per highest AHRI Standard for Casing Construction:** The casing construction is of prime importance in two tier systems i.e. Systems with two streams with high latent difference between both.

**DAHU is manufactured to meet AHRI 1350 Standard requirements as given the following rating.**

- **Casing Deflection Rating Class: CD4**
- **Casing Air Leakage Class: CL1**
- **Thermal Transmittance Class with Leakage: CT2**
- **Thermal Bridging Class: CB2**

- **Widest Range:** The DAHU series double skin air handling unit (AHU) consists of 15 models having air volumes ranging from 1700 -60000 CMH and internal static pressures as high as  $\pm 1000\text{pa}$ , to ensure maximum flexibility and the best solution for your application.

DAHU air handling unit uses special extruded aluminum & pvc profile corner post which break the thermal bridge, reinforced plastic traixial lug, flush fitting panels and doors, and has a smooth surface and attractive profile.



**All sizes of the FlexAir (except size 060 and 100) has filters in standard dimensions making maintenance and stocking of spare filters easier. A big advantage for customers those who wish to keep a stock of filters.**



\* DAHU Series is Certified in accordance with the AHRI Central Station Air Handling Unit Casing Certification Program, which is based on AHRI Standard 1350. Certified units may be found in the AHRI Directory at [www.ahridirectory.org](http://www.ahridirectory.org)

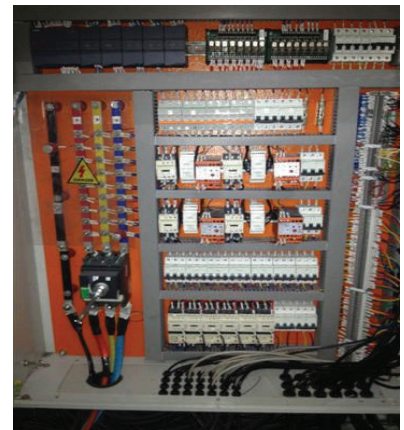
# Controls, Sensors and Connectivity

Fully integrated solutions for TFA & DOAS units with sensors, controls (for Varying ambient conditions) & connectivity

## Basic Electrical & Controls

Fully wired system comes with the following features:

- IP 54 Control panel enclosure
- Starters for Supply air Fan with (ON/OFF/Trip) indication
- Starters for Exhaust air Fan with (ON/OFF/Trip) indication
- Starters for Heat Recovery Wheel with (ON/OFF/Trip) indication
- Optional Interlocking for Supply Air Fan, Exhaust Air Fan & Heat Recovery Wheel Drive Motors
- Safety switches (door lock switches)
- Differential Pressure Switches for Indication of clogged/Dirty filters



## Basic Control with Online Measurement

Fully wired system comes with display of:

- Temperature & Humidity of Outdoor, Return, Supply & Exhaust Air,
- Supply and Exhaust Airflows
- Effectiveness (as per ASHRAE 84-2008)





## Fully Automatic Programmable “Controls and Touch Screen”

Fully wired control panel with following features:

- Dual (Temp. & RH ) sensors for Outdoor, Supply & Return air
- Coil off Temperature Sensor
- Differential Pressure Switches with indication of Clogged/Dirty filters
- Pressure transmitters for measuring pressure drop across the Energy Recovery Wheels & other Components
- Variable frequency Drives for Supply & Exhaust Air Fan motors
- Touch Screen for setting up and on line display of Temp. & RH
- Effectiveness & Air flows displays
- Remote monitoring



# Kitchen Exhaust Unit DRI-ECU Series

## Important Features

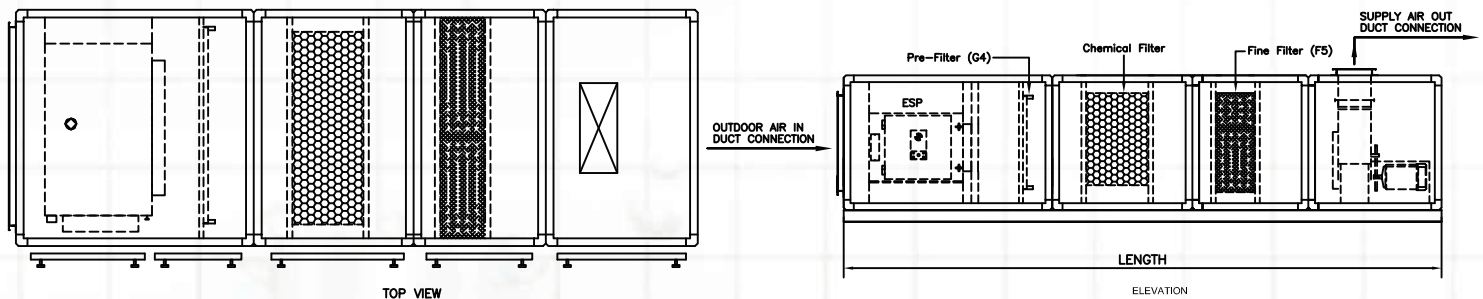
DRI Kitchen Exhaust units are designed to eliminate the oil, grease, dust particles, smoke, and odor from the kitchen exhaust. The units are engineered and constructed to meet today's market standards requirement of keeping the environment clean with a cost-effective, economical & easy to maintain system. Our units are designed to have the flexibility of installation on the roof top, ceilings, or any other area in the exhaust air stream to take care of the design constraints. Units are designed as per relevant standards.

## Typical Applications

- Restaurants
- Hospitals
- Mall's / food court
- Hotels

Options for UV Filtration, ESP wash module, UL rated fire dampers , variable frequency drive & HMI are also available on request.

## Example Unit Configuration



# Evaporative Cooling Modules for AHUs

## Important Features



**Incorporating the new Fire Retardant EcoCool Evaporative Cooling Pads:** Special flame retardant material ensures total safety in a hazardous environment



**High Water Retention:** Engineered from cross-sectional, specially treated fluted media capable of absorbing and retaining more water to provide maximum cooling efficiency. EcoCool Evaporative Cooling Pads take on more water almost 20 to 40% higher amount of water than many other international pads



**Long and extended life:** Special protective edge coating lessens build-up of dust particles, thus, enhancing the life of pads



**High Structural Strength:** Stiffening and rot resisting agents provide exceptional structural strength



**High Cooling Efficiency:** Pads are designed, engineered and manufactured from a specially treated inorganic material which ensures exceptionally high evaporative efficiency



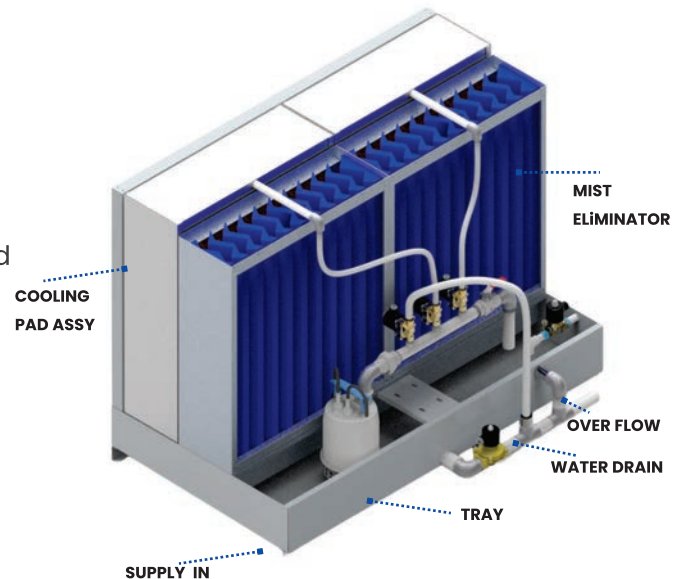
**Easy Maintenance:** Low and very easy maintenance



**Low Operating Cost**



Series  
(ECM 600-600 to 2400-2400)



## Power Requirement

ECM 600-600 to ECM 1200-1200	90 Wt, 230v / 1 PH / 50 HZ
ECM 1500-1500 to ECM 1800-1800	180 Wt, 230v / 1PH / 50 HZ
ECM 2100-2100 to ECM 2400-2400	370 Wt, 230v / 1PH / 50 HZ



Evaporative  
Cooling Modules for Air Cooled Chiller





## Comprehensive Evaporating Cooling Solutions

Portable Coolers



Top Discharge Coolers



Side Discharge Coolers



Ducted/ Direct Evaporative Coolers



Indirect - Direct Coolers



Desiccant Cooling Systems (with IDEC)



Solar-Assisted Desiccant Cooling Systems (with IDEC)



## Features

- Metal body
- Highly cost efficient
- Very robust and durable
- Industrial & Commercial ducted air cooling Solutions
- Enhance productivity & reduce absenteeism
- Remove fumes & odour
- Design & Installation services also available



## Evaporative Spot and Portable Air Coolers



Free Flow Portable  
Evaporative Coolers  
APC - 20K

### Free Flow Portable Coolers

- Portable Industrial & Commercial air cooler on wheels are Ideal for machine operators, small in assembly lines, warehouses, events, etc
- It has four side pads design, easy to install & maintain. It can be kept indoors also
- Multiple speed axial fan for high and better air spread
- Heavy-duty lockable caster wheels
- Low noise



Free Flow (Spot)  
Evaporative Coolers  
ATD - 10K

### Free Flow Spot Coolers

#### Advantages

- High efficiency long life 60mm four side pads
- CNC fabricated high quality 16G powder coated / painted casing
- Quick and easy removal of cooling pad
- High efficiency fan
- Designed for low RPM to ensure low noise levels & trouble free operation
- High quality submersible pump for longer life
- Over flow, and auto cut arrangement provided for make-up water
- Caster wheels provided for rotation and direction change



ATD - 20K



ATD - 25K



ATD - 35K



## Direct/Ducted Evaporative Air Coolers



**Range Available upto ADC - 20K to ADC - L - 125 K**

- World's Best Performing Evaporative Air Coolers with highest cooling efficiency
- Built with high static pressure for comprehensive area coverage through long ducts and numerous grill for better air management
- AMCA (Air Movement and Control Association) Certified DIDW (Double Inlet Double Width ) Blowers
- Most robust, rustproof metal body with heavy duty pre-coated GSS (Galvanised steel sheet)
- Proudly made in India at our world-class manufacturing plant
- Branded Spares used for its manufacturing for an easy repair or replacement
- An environment-friendly air cooling solution
- Specifically designed for the cooling of large industrial and commercial spaces
- Trusted brand & innovative Technology
- Wide Range of models available to cool large areas economically
- Works well in harsh outdoor conditions
- Easy to install at the site No assembly required, no trial & error for motors
- Long, trouble-free life compared to cheap imported plastic body coolers
- Duct designing expertise provided by the company



**Customized  
Evaporative Air Coolers**







## Indirect – Direct Evaporative Coolers (2/3 Stage Cooling)

IDEC Systems provide most Economical Cooling Solutions for:

- Large Industrial & Commercial Spaces
- Utilize natural resources i.e. Air & Water for cooling the air
- Higher cooling with less moisture addition in air



### Advantages

- Drastic Reduction in Operational Costs (80%) Compared to Conventional Air-conditioning
- Significant Increase In Productivity
- Environmentally Friendly
- Best Possible Indoor Air Quality
- No Harmful Refrigerants



### IDEC Systems are suitable for

- **Custom Solution:** Providing Cooling Solution for large spaces in Warm & Tropical Weather conditions
- **Smart Operation Modes available for All Year Round Comfort**
  - Single Stage Indirect Cooling
  - Two Stage Indirect + Direct Cooling
- **Smart Controls:**
  - Temperature & RH Sensors
  - TDS Sensors for maintaining water quality
  - Optional VFD to modulate supply working fan speed & air quantity

IDEC Installation at Packaging Plant



**Bry-Air®**

# Dehumidifiers

## Humidity Control Desiccant Dehumidification



Engineered Dehumidifier  
2500 CMH to 25000 CMH and above

Bry-Air BrySmart® series (BBS)  
with Patented Technology



Fl series  
Dehumidifiers



BryCool™



BryPool™ for  
Indoor  
Swimming Pool



Compact  
Dehumidifiers  
170 CMH to 3000 CMH



Tray Dryer for  
Drying Seeds  
and Agro Products



**Bry-Air**<sup>®</sup>

# Gas Phase Filtration

## Gas Phase Filtration Systems

Data Center  
Air Purifier



Control Room  
Air Purifier



Odour Control  
Unit



Ethylene  
Scrubber



Thin Bed  
System



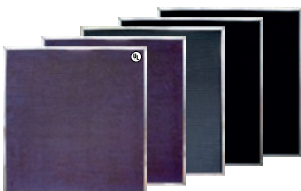
Deep Bed  
System



BryShield<sup>™</sup>



Prevent e-corossion in server rooms



Honeycomb Chemical  
Filter - DRISORB<sup>™</sup> series



Granular Media  
BRYSORB<sup>™</sup> series



Corrosion Classification  
Coupon



Atmospheric Corrosivity  
Monitor





**We are never too far from you !**



  
**Installations in  
over 80 Countries**

  
**Representatives  
in Over 60 Countries**

  
**1500+  
Employees**

  
**13 Manufacturing  
Facilities**

  
**9 R&D Labs**

  
**27 New  
Technologies**

  
**142 Patents  
Application Filed**

  
**90 Patents  
Granted/Allowed**

## Systems Installation base in over 45 Countries



**Brazil**



**UAE**



**Saudi Arabia**



**Oman**



**Bahrain**



**Qatar**



**Nigeria**



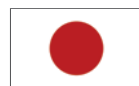
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**South Africa**



**Malaysia**



**Japan**



**Bangladesh**



**Sri Lanka**



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**Philippines**



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