

# EVAPORATIVE COOLING SOLUTIONS

Portable



Top Discharge



Ducted/Direct



Indirect-Direct





# WORLD'S BEST PERFORMING EVAPORATIVE AIR COOLERS

ARCTIC™ is DRI's Evaporative Cooling Solutions Company. Evaporative cooling uses air & water to down the dry bulb temperature through evaporation of water.

DRI is a global provider of components & systems for Energy Recovery, Indoor Air Quality (IAQ), Fresh Air Treatment, Evaporative Cooling, Desiccant Dehumidification, and Green Buildings.

## FEATURES

Energy Efficient



Green Air-Conditioning



Cost Effective



EcoCool pads Inside



Most Powerful air throw & cooling



Centrifugal Blower



Strongest Rust Proof Metal Body



Plug & Play

## BENEFITS



Lowest power consumption & Highest Cooling



Provides natural cooling with air and water



Low Running & maintenance cost



Resin coated, ROHS Certified & High Saturation Efficiency Pads



Longest life of cooler in outdoor conditions



For Powerful air & better air management



Highest Static for long ducts and Longest Throw



Completely assembled cooler

# OUR PRODUCT RANGE

Comprehensive Evaporating Cooling Solutions

Evaporative Cooling Pads (ECPs)



Portable Coolers



Side Discharge Coolers



Top Discharge Coolers



Ducted/ Direct Evaporative Coolers



Indirect - Direct Coolers



# PORTABLE COOLERS

## Free Flow with Axial Fan

The Arctic heavy-duty metal body portable air cooler is a free-flow ductless air cooler ideal for industrial and commercial uses. Arctic free-flow coolers come with an Axial Fan for better air management and air spread. Multiple coolers can be installed to cover larger areas. It is a plug and play device and can be installed easily at the site. It is also available in a single-phase multi-speed fan.

### Special Features:

- Portable heavy duty cooler on wheels

## Technical Specifications

Model	APC
Body material	Special Pre-plasticsized coated galvanised steel
Minimum Evaporation Efficiency (%)	80
Pad Surface Area (m2)	1.14
Pad Thickness (mm)	100
Connection Load (kw)	0.61
Power Supply	230/1Ph/50Hz
Overall Dimensions (L x W x H) (mm)	750x1150x1550
Air Discharge Grill Size (mm)	Free
Fan Type	Axial
Tank Capacity (Liter)	120
Dry Weight* (Kgs)	80

\* Industrial long life construction (heavy duty)

## Design Guide- SI Units

Model	Air Flow (CMH)	Cooling Space/Area (Sq.Ft.)	Throw (meter)
APC	18000	2000	25



# SIDE DISCHARGE COOLER

## Side Discharge Coolers with Damper

Arctic side discharge heavy-duty metal-body air coolers are freeflow ductless air coolers, ideal for industrial and commercial use. Arctic Coolers comes with blowers for the most powerful air throw. Multiple coolers can be installed to cover larger areas; it's a plug and play device that can be installed easily at the site.

### Special Features:

- Ductless air cooler with damper
- No ducting involved

### Technical Specifications

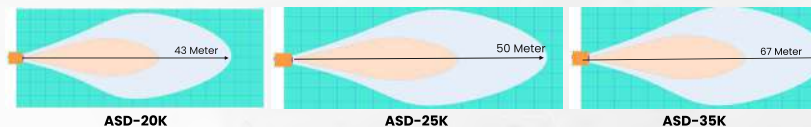
Model	ASD-20K	ASD-25K	ASD-35K
Body material	Special Pre-plasticsized coated galvanised steel		
Minimum Evaporation Efficiency (%)	90	90	90
Pad Surface Area (m2)	1.56	2.17	3.74
Pad Thickness (mm)	100	100	100
Connection Load (kw)	0.79	1.55	3.88
Power Supply	230/1Ph/50Hz	415/3Ph/50Hz	
Overall Dimensions (L x W x H) (mm)	1150x1150x950	1150x1150x1150	1450x1550x1450
Air Discharge Size (mm)	400x400	400 x 400	650 x 650
Fan Type	Centrifugal DIDW (Double inlet Double Width)		
Tank Capacity (Liter)	110	110	190
Dry Weight* (Kgs)	170	205	300

\* Industrial long life construction (heavy duty)

### Design Guide- SI Units

Model	Air Flow (CMH)	Cooling Space/Area (Sq.Ft.)	Throw (meter)
ASD-20K	8000	3500	43
ASD-25K	11000	4100	50
ASD-35K	26000	6600	67

### Free Flow Mode



# TOP DISCHARGE COOLER

## With L Shape Duct

Arctic top discharge heavy-duty metal body air coolers are freeflow ductless air coolers perfect for industrial & commercial uses. They come with a blower for powerful air throws. Multiple coolers can be used to cover larger spaces with ease. It is a plug and play device and can be installed easily at the site.

### Special Features:

- Top discharge cooler with a curved scroll & grill
- Ductless air cooler

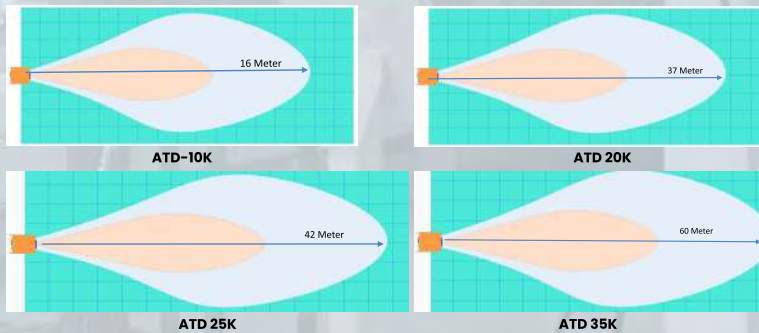
Model	ATD-10K	ATD-20K	ATD-25K	ATD-35K
Body material	Special Pre-plasticsized coated galvanised steel			
Minimum Evaporation Efficiency (%)	80	90	90	90
Pad Surface Area (m2)	0.85	1.56	2.17	3.74
Pad Thickness (mm)	60	100	100	100
Connection Load (kw)	0.19	0.79	1.55	3.88
Power Supply	230/1Ph/50Hz		415/3Ph/50Hz	
Overall Dimensions (L x W x H) (mm)	650x650x1200	1150x1150x1450	1150x1150x1650	1450x1550x2150
Air Discharge Grill Size (mm)	440x240	600x500	800x500	1000x600
Fan Type	Axial	Centrifugal DIDW (Double inlet Double Width)		
Tank Capacity (Liter)	60	110	110	190
Dry Weight* (Kgs)	62	165	325	595

\* Industrial long life construction (heavy duty)

## Design Guide- SI Units

Model	Air Flow (CMH)	Cooling Space/Area (Sq.Ft.)	Throw (meter)
ATD-10K	2500	800	16
ATD-20K	8000	3000	37
ATD-25K	11000	3500	42
ATD-35K	26000	5000	60

## Free Flow Mode



## DUCTED EVAPORATIVE COOLERS

Direct Evaporative Coolers also called Ducted Evaporative Coolers, Industrial Coolers, Commercial Coolers, Air Washers, Swamp Coolers and Industrial Ventilation Coolers, offer a completely natural way of delivering refreshing cool air. Arctic range of Evaporative cooling units have been specifically designed for the cooling of industrial and commercial buildings.

They are capable of lowering the fresh air dry bulb temperature by 7-12°C, e.g- the air-off temperature from the evaporative cooler for an outside temperature of 40-43°C can be as low as 28-30°C. They allow cool fresh air to be introduced throughout a building and also the stale hot air to be displaced out through openings like windows. Unlike mechanical air-conditioning which continuously cools re-circulated air, Arctic coolers introduced 100% cool fresh air into the space.

Arctic Direct Evaporative Coolers use the EcoCool Evaporative Cooling Pads. EcoCool pads are highly efficient, consistent in performance over a very long life, self-supporting, highly absorbent and can be easily cleaned. They allow higher cooling with lower air volume and are over 80% efficient.

### Special Features:

- AMCA Certified DIDW Blowers
- Wide Range of models



# DUCTED EVAPORATIVE COOLERS

## Technical Specification

Model	ADC-20K	ADC-25K	ADC-35K	ADC-45K	ADC-L-85K	ADC-L-100K	ADC-L-125K
Body material	Special Pre-plasticsized coated galvanised steel						
Minimum Evaporation Efficiency (%)	90	90	90	90	90	90	90
Pad Surface Area (m <sup>2</sup> )	1.56	2.17	3.74	6.06	9.08	13.88	13.88
Pad Thickness (mm)	100	100	100	100	100	100	100
Connection Load (kw)	0.79	1.55	3.88	5.87	9.67	11.75	15.75
Power Supply	230/1PH/50Hz	415/3Ph/50Hz					
Overall Dimensions (L x W x H) (mm)	1150x1150x950	1150x1150x1150	1450x1550x1450	1750x2350x1750	2150x2400x2150	2150x2400x2150	2300x3300x2500
Duct Connection size (mm)	400x400	400x400	650x650	900x900	1100x1100	1250x1250	1400x1400
Fan Type	Centrifugal DIDW (Double inlet Double Width)						
Tank Capacity (Liter)	110	110	190	475	715	1000	1000
Dry Weight* (Kgs)	165	200	295	565	790	910	1010

\* Industrial long life construction (heavy duty)

## Design Guide - SI Units

Model	Air Flow at given ESP	External Static Pressure	Air Flow at below ESP	External Static Pressure
	m <sup>3</sup> /h	mmWC	m <sup>3</sup> /h	mmWC
ADC-20K	8000	5	5100	10
ADC-25K	11000	10	6800	20
ADC-35K	26000	10	15300	20
ADC-45K	45000	10	25500	30
ADC-L-85K	75000	10	42500	30
ADC-L-100K	90000	10	51000	30
ADC-L-125K	120000	10	68000	30

### Disclaimer :

- Dimensions and weight may vary in few models
- Because of our policy of continuous product improvements, specifications are subject to change without notice

## Ducted Evaporative Cooler Range





# INDIRECT DIRECT EVAPORATIVE COOLER

A single stage Indirect Evaporative Coolers use the advantages of cooling using water evaporation without increasing humidity in the supply air. This is done through our special DRI COOL module.

A 2-stage evaporative cooling system is an advanced cooling system that utilizes indirect evaporative cooling modules followed by a direct cooling section. The overall result is lower dry bulb temperature as compared to a direct only evaporative coolers.

A third stage can be added as a cooling coil which is turned on when the second direct evaporative cooling section is off. This is based on the ambient conditions.

These units are also offered in very large air volumes and with all sensors, controls and electrical packaged on board the unit.

## Special Features:

- AHRI Certified Casing
- Fully factory assembled
- Better Indoor Conditions



## Technical Specification

Model	Air Flow Capacity		Supply Air Motor	Working Air Motor	Pump	External Static Pressur	Overall Dimensions (L X W X H)				Unit Weight	Appr. Operating Weight
	CMH	CFM	kw	kw	kw	PA	Length	Width	Height	HI	PA	PA
ID-L3-30	5098	3000	2.2	0.75	0.19	250	2440	1350	1850	600	690	860
ID-L3-50	8500	5000	3.7	1.1	0.25 x 2	250	2890	1555	1850	750	1070	1240
ID-L3-75	12700	7500	5.5	1.1	0.25 x 2	250	2890	2100	1850	750	1450	1620
ID-L3-100	17000	10000	7.5	1.5	0.25 x 2	250	3350	2710	1850	860	1670	1840
ID-L3-150	25500	15000	9.3	2.2	0.25 x 2	250	3625	2400	2950	1045	2250	2420
ID-L3-200	34000	20000	15	3.7	0.25 x 2	250	3775	2710	2950	1045	2640	2810
ID-L3-250	42500	25000	18.5	3.7	0.25 x 2	250	3925	3270	3050	1150	3050	3220
ID-L3-300	50977	30000	18.5	5.5	0.25 x 2	250	4075	3765	3100	1390	3500	3670
ID-L3-350	59500	35000	22	3.7x2	0.25 x 2	250	4075	4360	3200	1045	3930	4100
ID-L3-400	68000	40000	15 X 2	3.7x2	0.25 x 2	250	3775	4970	3200	1045	4210	4380



# INDIRECT - DIRECT (TWO STAGE) EVAPORATIVE COOLERS

## (Evaporative Cooling)<sup>2</sup>

ARCTIC SuperCool Series are suitable for :

- Large spaces in Warm & Tropical Weather Condition
- **Smart Operation Modes and ventilation mode available**
- Single Stage Indirect Cooling
- Two Stage Indirect + Direct Cooling

## Advantages

- **Environmentally Friendly**
  - Best Possible Indoor Air Quality and 100% Fresh Air
  - No Harmful Refrigerant
- **Think Savings**
  - Small Investment & Low Maintenance cost
  - Low Running cost - Operational Cost (80%) Compared to Conventional Air-conditioning
  - Less Energy consumption
- **Significant Increase in Productivity**
- **Healthy Spaces - Doors and Windows can be left open**
- **5 - 6°C cooler air than Direct Coolers**



**Supercool Series**

## Technical Specification

Model	Air Flow Capacity		Air Flow Capacity		
	CMH	CFM	Length	Width	Height
DSC-60	10200	6000	2500	1450	1850+150
DSC-100	17000	10000	3100	2300	1850+150
DSC-150	25500	15000	4000	1900	2575+150

# EVAPORATIVE COOLING PADS (ECPs)



EcoCool evaporative cooling pads use the simple principle of cooling by evaporation and humidify the air. They are saturated with water, sprayed onto them through prefixed channels and blown with a fan to produce cool and humidified air. EcoCool evaporative cooling pads are a cost-effective and eco-friendly method of providing cooler air for offices, large areas, homes and other buildings.

## Features:

- Cellulose Base
- Rigid Structure
- Glueing
- Technical Support
- High Surface Area of Pads
- No Edge Build-up
- Retrofits
- ROHS Certified
- No Harmful Chemicals
- Compatible
- Antibacterial Cooling Pads
- Exported Worldwide



# ARCTIC APPLICATIONS



Factory Shop Floors



Canteen & Kitchen Ventilation



Warehouses



Cinema Halls



Residences



Green House & Tea Industry



Schools



Showrooms



Religious Places



Offices



Shop Floor & Assembly Line



Hotels & Restaurants



Gym



Multipurpose Halls



Poultry Farm

# INSTALLATION EXAMPLES

Commercial Cooling



Industrial Cooling



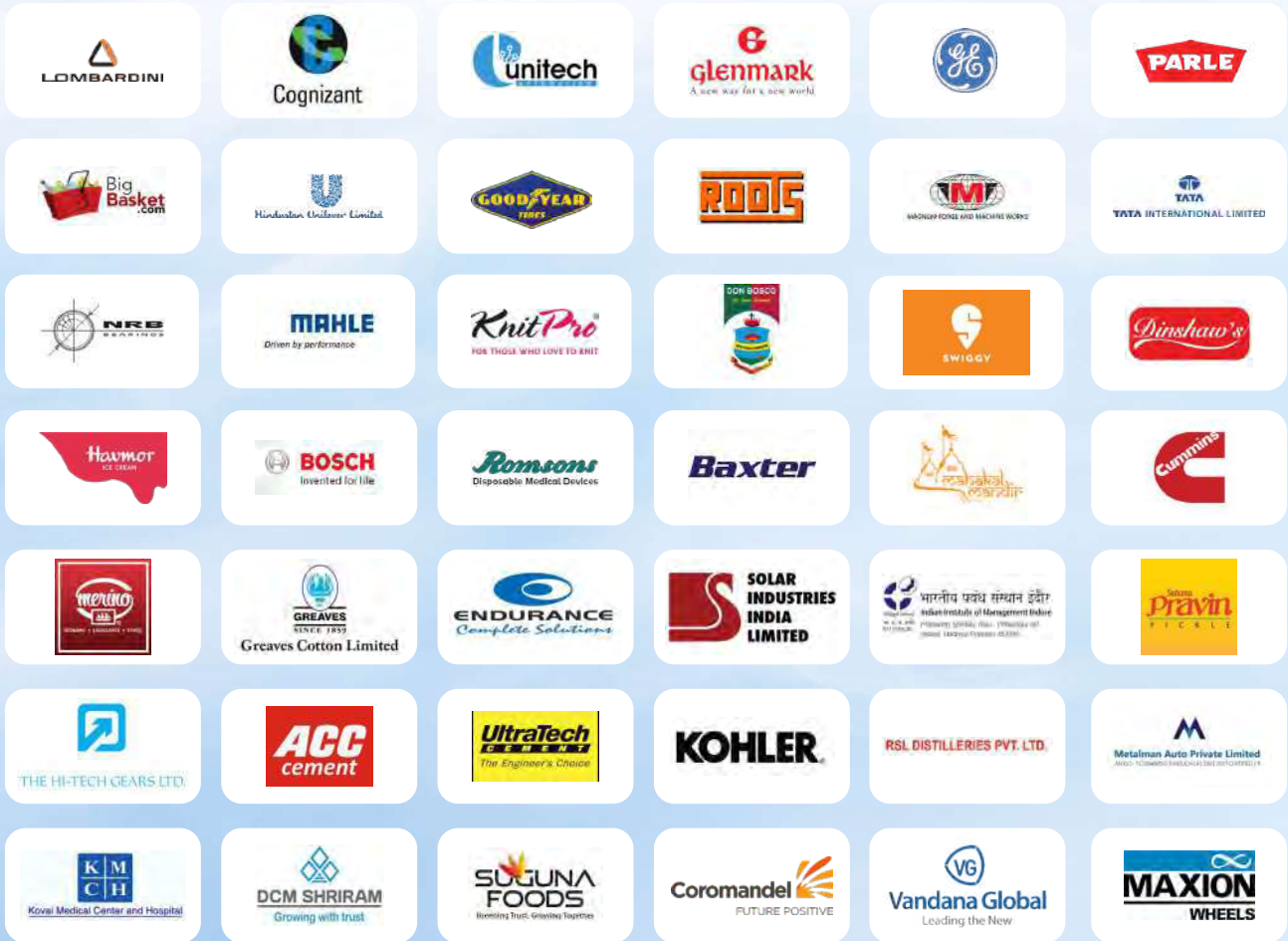
Residential Cooling Installations



Factory cooling experts

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