



Indirect Evaporative Cooling
1500 L/sec – 12000 L/sec

INDEC Efficient Effective Fresh Air Cooling



Manufactured
by Armcor





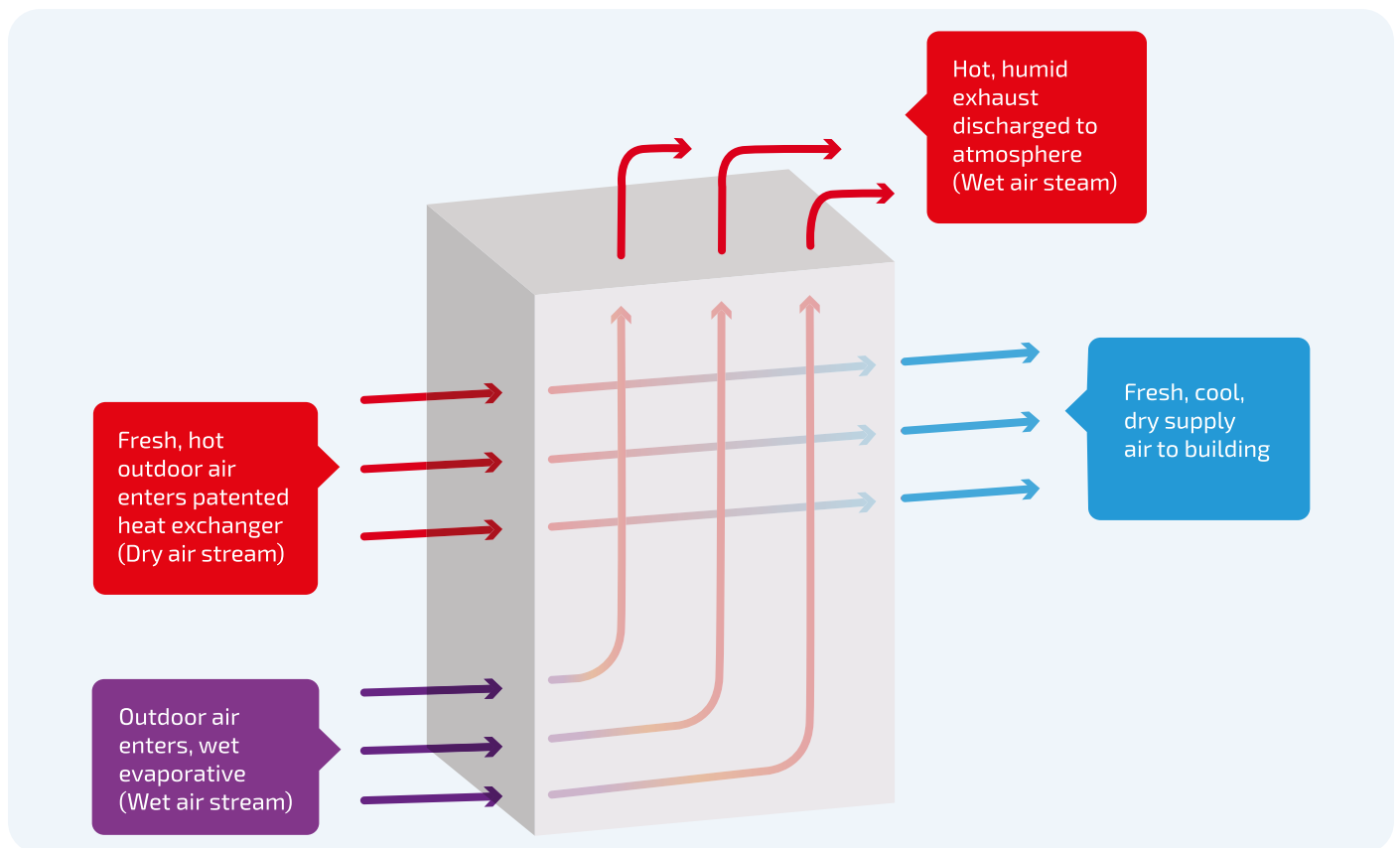
Indirect Evaporative Cooling

Indirect evaporative cooling is the latest breakthrough in cost effective fresh air cooling systems. It cools using the basic natural principles of water evaporation, but without adding any moisture to the airstream.

Armcor Air Solutions have developed the INDEC range of coolers using a patented indirect polymer heat transfer core that can deliver cool, 100% fresh outdoor air with very low energy consumption.

Incoming fresh air passes through the primary heat exchange core which has a series of wet and dry channels allowing natural evaporation to cool the air. Warm moist air is expelled while cool air, without added moisture is delivered into the building. Through this natural evaporation process, the outlet air temperature becomes lower than the wet bulb temperature of the ambient air.

A secondary direct evaporative pad can further reduce the outlet air temperature with minimal added moisture.





INDEC Fresh Air: The Epidemic Solution

COVID-19 has ravaged every nation with the airborne transmission of this deadly virus. Particularly affected are Aged Care Facilities, Prisons, Meat Processing Plants, School, Hospitals anywhere people are gathered.

Recent Scientific Studies have recommended that to reduce airborne transmissions, all building should address 3 important concerns:

1. Increase the amount of fresh air
2. Decrease the amount of recirculated air
3. Use UV-C Germicidal Lights to kill bacteria and viruses in the air

INDEC may be your solution to safeguarding your facility. With 100% fresh air cooling at very economical running costs, the risk of airborne transmission through recirculated air is greatly reduced.



How Does Indirect Evaporative Cooling Work?

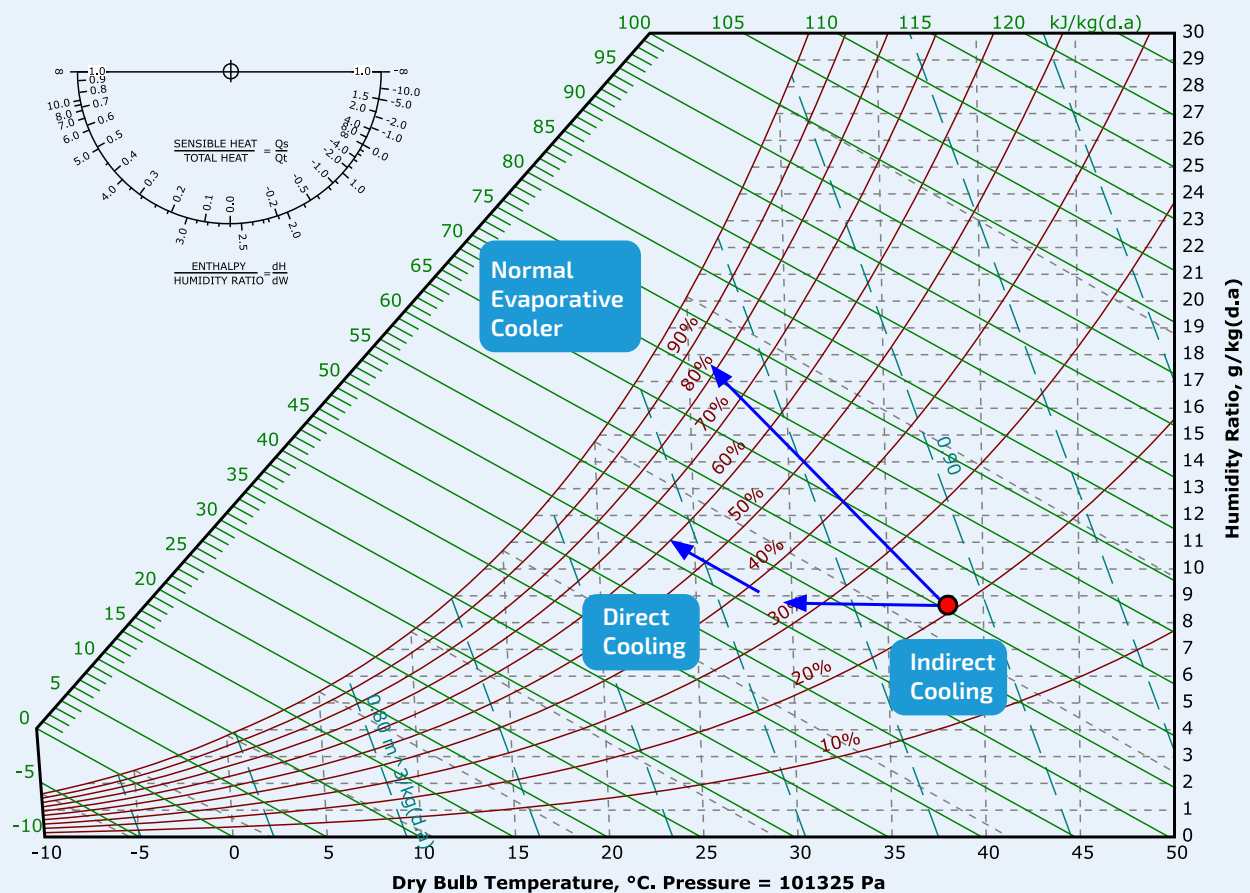
The science behind the Indirect Process is simple. Just like the evaporation of moisture on your skin gives a cooling sensation, evaporation of water in the indirect process cools the incoming air.

How Does Indirect Evaporative Cooling Work?

As shown on a psychrometric chart a typical scenario has fresh air entering at 38°C Dry bulb (DB) and 21% Relative Humidity (RH).

After the indirect evaporative process the dry bulb temperature has significantly reduced and the moisture content remains the same. A further reduction in temperature is achieved through the direct evaporation pad.

Psychrometric representation of Indirect/ Direct Cooling



Precise Comfort Control PCC-40C

For INDEC Applications

The INDEC Indirect Evaporative Cooling Unit, has an optional Low-Level PCC-40C Controller. The main control module is mounted in the unit, connected by 4 wire low voltage cable to a remote wall mounted LCD adjustable sensor.

PCC-40C Enables:

- Remote temperature sensor
- High humidity direct cooling shut down
- Time clock functions
- Fault signals display on LCD
- Controls can be combined with DX System
- ModBus Available



Outside temperature

34.7°C

Outside RH

40%

Room temperature

27.4°C

Room RH

51%

Ultra Violet Light Water Disinfection System

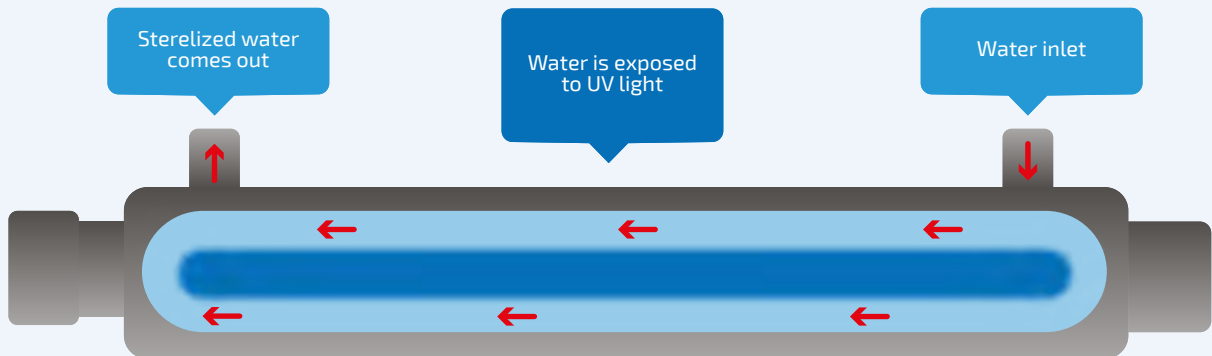
Armcor Air Solutions also offers an optional quality safe water disinfection system using Ultraviolet lights for the INDEC Indirect Evaporative Cooler.

Unlike chemical applications to water disinfection, UV-C lights provide rapid effective sterilizing of harmful bacteria, viruses and protozoa. When these microorganisms are exposed to Germicidal wavelengths of the UV lights, they are incapable of reproducing and infections.

Treated water will keep the sump clean from scale build up and reduces maintenance frequency and associated costs.



Water Disinfection Ultra Violet Lights





How Can This Process Help Your Project?

- Stand-alone system where you need to efficiently cool 100% fresh air
- Pre-cooling of fresh air before it enters the main air-conditioning system

Stand alone systems using both Indirect and Direct Cooling can efficiently cool 100% fresh air requirements for:

- Data Centres
- Fast Food Outlets
- Kitchen Exhaust
- Factory Areas
- Generator Rooms
- Leisure Centres
- Mining
- Lobby Ventilation
- Green Star Buildings
- Wine Vat Storage

Pre-cooling systems using Indirect Cooling can temper the fresh air requirements before entering the main air conditioning system.

Indec Product Range

| Model | Max Output Capacity | Fan Power Requirements | | Dimensions |
|--------------|---------------------|------------------------|---------|--------------------|
| | Air Volume(l/sec) | Volts/Phase | FLA | L x W x H mm |
| INDEC1500P3 | 1500 | 415V/3Ph | 4.3/Ph | 2270 x 915 x 1950 |
| INDEC2000P3 | 2000 | 415V/3Ph | 6.8/Ph | 2270 x 915 x 2250 |
| INDEC3000P3 | 3000 | 415V/3Ph | 8.6/Ph | 2270 x 1730 x 1950 |
| INDEC4000P3 | 4000 | 415V/3Ph | 13.6/Ph | 2270 x 1730 x 2250 |
| INDEC6000P3 | 6000 | 415V/3Ph | 20.4/Ph | 2270 x 2545 x 2250 |
| INDEC8000P3 | 8000 | 415V/3Ph | 27.2/Ph | 2270 x 3360 x 2250 |
| INDEC10000P3 | 10000 | 415V/3Ph | 34.0/Ph | 2270 x 4175 x 2250 |
| INDEC12000P3 | 12000 | 415V/3Ph | 40.8/Ph | 2270 x 4990 x 2250 |



Fresh Air Indoors

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