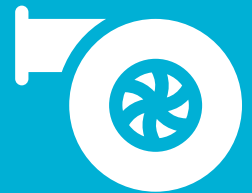
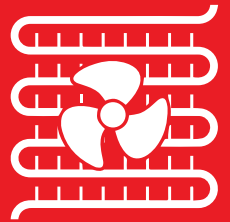




DeltaT *presents* HY-DEL Hybrid Cooling Unit



DeltaT
SYSTEMS PVT LTD

Your Trusted Partner for Optimal Climate Solutions

HY-DEL HYBRID COOLIG UNIT

About HY-DEL

- Hybrid Unit is a system that combines Evaporative Cooling and Refrigerated Air Conditioning for smooth year-round operation.
- It achieves maximum efficiency with Single / 2-stage at Lower RH & High Wet bulb depression.
- During Monsoon, when RH is higher and Wet bulb depression is lower, Conventional Air Conditioning takes over.
- The Hybrid unit can function as an Indirect/Direct Evaporative Air Cooling Unit / Conventional AHU depending on ambient conditions.
- The dampers on the machine enable complete Fresh Air for Single / 2-stage and Re-circulated Air from the room for the Air Conditioning stage.
- All the components in the system can be automatically operated using Smart Control by switching between the modes of operation (as shown below) based on ambient & indoor conditions.

HY-DEL Different Modes Of Operation

- Ventilation mode:** Only fresh air
- Indirect Evaporative cooling mode:** Only sensible heat exchange
- Indirect+ Direct Evaporative cooling:** Sensible + Adiabatic heat exchange
- Treated fresh air cooling mode:** Sensible heat exchange + refrigerant cooling
- Air Conditioning mode:** Refrigerant cooling with re-circulation air.
- Smart Controller:** Automatic mode selection based on ambient conditions.

Modes of Operation

Modes of Operation	100% Fresh Air Damper	10% Fresh Air Damper	90% Return Air Damper	By-Pass Damper	Primary Blower	CT-SHX Pump	Refrigerant Coil	AHX Cooling Pad Pump	Secondary Blower	DX / VRF System
Ventilation	ON	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
Indirect Evaporating Cooling	ON	OFF	OFF	ON	ON	ON	OFF	OFF	ON	OFF
Direct Evaporating Cooling	ON	OFF	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
Indirect+Direct Evaporating Cooling	ON	OFF	OFF	ON	ON	ON	OFF	ON	ON	OFF
Treated Fresh Air Cooling	ON	OFF	OFF	ON	ON	ON	ON	OFF	ON	ON
Air Conditioning	OFF	ON	ON	OFF	ON	OFF	ON	OFF	OFF	ON



Supreme
Cooling



100%
Fresh Air



Energy
Saving



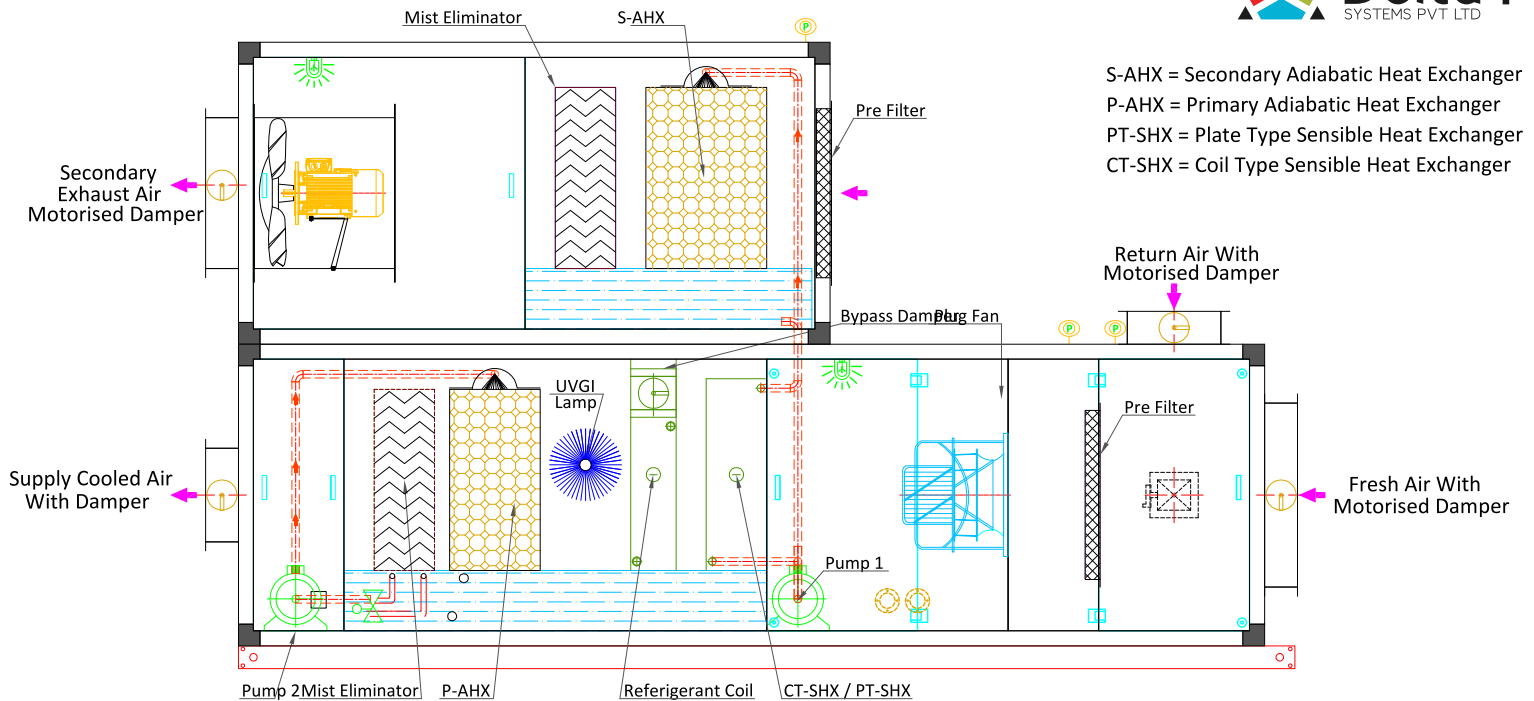
Hygienic
Indoor
Air Quality



Eco
Friendly



Low Life Cycle
Cost



Benefits

- At least 30% more effective than conventional single stage evaporative cooling systems.
- Supply air temperature is possible below ambient WBT.
- System saves energy up to 60% over conventional air conditioning, leading to lower operational costs.
- 100% fresh and filtered air ensures excellent indoor air quality.
- Cooling system offers excellent ROI - return on investment as it has low life cycle cost.
- Only filtration and positive pressurization is possible.
- Avoidance of CFCs results in zero ozone-depletion, reduces greenhouse gases & earns carbon credits.

Application



Industry



Commercial Places



Warehouses



Healthcare



Pharma Industry



Institution



Hospitality



Religious Places



Residential



Green Buildings

HY-DEL Hybrid Cooling Unit

Model No.	HY-DEL-20	HY-DEL-40	HY-DEL-60	HY-DEL-80	HY-DEL-100
Airflow Capacity-CFM	2000	4000	6000	8000	10000
TSP (mm-wg)	65	65	65	65	65
Unit construction	Double Skin Panel with PUF Insulation				
Outer / Inner skin	PPGI / GI (Wet section in SS 304)				
Type of Blower	DIDW Forward / Backward Curve Centrifugal Fan (Plug / EC Fan option available)				
Blower Standard	AMCA Certied				
Type of Drive	Belt Driven (Direct driven Option also available)				
Motor Specifications	IE2 / IE3 / IE5 Efficiency				
Total Connected Load- kW CT-SHX / PT-SHX	3.3 / 2.5	4.6 / 4.7	7.0 / 7.0	9.5 / 7.0	10.3 / 9.0
Sensible Heat exchanger	Coil Type (CT-SHX) / Plate Type (PT-SHX)				
Adiabatic Heat exchanger	Cooling Pad- Honeycomb Cellulose Paper (AHX)				
Sump	Stainless Steel-SS 304 Grade				
Filtration	Pre Filter Efficiency 90% down to 10 micron (Combination / Fine Filter option Available)				
Dimension (mm)					
Length (CT-SHX / PT-SHX)	3700 / 3850	3880 / 4100	4050 / 4220	4170 / 4410	4260 / 4540
Width (CT-SHX / PT-SHX)	1030 / 1280	1620 / 1760	1700 / 2260	1800 / 2640	2070 / 2790
Height (CT-SHX)	1100 + 1100	1100 + 1100	1400 + 1400	1600 + 1400	1700 + 1700
Height (PT-SHX)	1180	1380	1480	1580	1860

Model No.	HY-DEL-20	HY-DEL-40	HY-DEL-60	HY-DEL-80	HY-DEL-100
Airflow Capacity-CFM	12000	15000	20000	25000	30000
TSP (mm-wg)	65	65	65	65	65
Unit construction	Double Skin Panel with PUF Insulation				
Outer / Inner skin	PPGI / GI (Wet section in SS 304)				
Type of Blower	DIDW Forward / Backward Curve Centrifugal Fan (Plug / EC Fan option available)				
Blower Standard	AMCA Certied				
Type of Drive	Belt Driven (Direct driven Option also available)				
Motor Specifications	IE2 / IE3 / IE5 Efficiency				
Total Connected Load- kW CT-SHX / PT-SHX	12.3 / 12.5	15.5 / 13.0	21.0 / 17.0	23.5 / 24.0	28.5 / 24.0
Sensible Heat exchanger	Coil Type (CT-SHX) / Plate Type (PT-SHX)				
Adiabatic Heat exchanger	Cooling Pad- Honeycomb Cellulose Paper (AHX)				
Sump	Stainless Steel-SS 304 Grade				
Filtration	Pre Filter Efficiency 90% down to 10 micron (Combination / Fine Filter option Available)				
Dimension (mm)					
Length (CT-SHX / PT-SHX)	4360 / 4730	4490 / 4880	4682 / 5010	4830 / 4730	4960 / 4880
Width (CT-SHX / PT-SHX)	2400 / 2460	2440 / 2940	2880 / 3620	3060 / 4020	3370 / 4620
Height (CT-SHX)	1700 + 1700	1850 + 1700	2000 + 2000	2300 + 2300	2360 + 2300
Height (PT-SHX)	2260	2260	2260	2260	2260

Note:

- Above data is based on standard selection, subjected to change based on application / requirement.
- Customized model available on demand.
- Specification may change without prior notice due to continuous design optimizations



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