



RH-Cube™ 18 Dehumidifier Data Sheet



The RH-Cube 18 is a high efficiency, high capacity, split-air dehumidifier which has a broad range of applications, from residential to commercial.

Depending on the application, the RH-Cube 18 can be paired with water-cooled or air-cooled DX condensers from 1.5 ton to 2.0 ton and deliver up to 321 pounds (146 litres) per day of water removal.

FEATURES

- Modular for easy installation – can be disassembled into three sections so that it can be installed by a single individual and can be maneuvered through narrow openings and tight spaces.
- Decoupled - Operates independently of the air conditioner. Can operate twenty four hours a day whether or not the air conditioner is running.
- No heat load - Split-air design means that it does not add to the air conditioner's heat load. In fact, the RH-Cube 18 provides a small amount of cooling.
- Simplified control – controlled by a simple humidistat. Does not interfere with room temperature.
- High capacity - removes up to 321 lbs (146 liters) per day.
- High Efficiency – total energy consumption of external condenser and RH-Cube 18 fan is less than 1.4 KWh per pound.
- Versatility - Four choices for delivery air ducts locations simplifies installation
- Serviceable - Completely serviceable from the front of the unit for cleaning and maintenance.
- Repairable - Built from standard off-the-shelf air conditioning components. Can be easily serviced by any certified HVAC technician.

PERFORMANCE

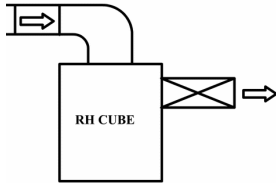
The tables below show RH-Cube 18 water removal capacity under various conditions.

Indoor Conditions	80°F / 27°C			75°F / 24°C			70°F / 21°C		
	pints/day	lbs/day	litres/day	pints/day	lbs/day	litres/day	pints/day	lbs/day	litres/day
60%	262	273	124	234	244	111	206	215	97
50%	223	233	106	190	198	90	168	175	80
45%	198	207	94	166	173	79			
40%	182	190	863						
35%									
30%									
1.5 ton Condenser									

Indoor Conditions	80°F / 27°C			75°F / 24°C			70°F / 21°C		
	pints/day	lbs/day	litres/day	pints/day	lbs/day	litres/day	pints/day	lbs/day	litres/day
60%	308	321	146	274	285	130	239	249	113
50%	257	268	122	219	228	103			
45%	227	237	108						
40%									
35%									
30%									
2.0 ton Condenser									

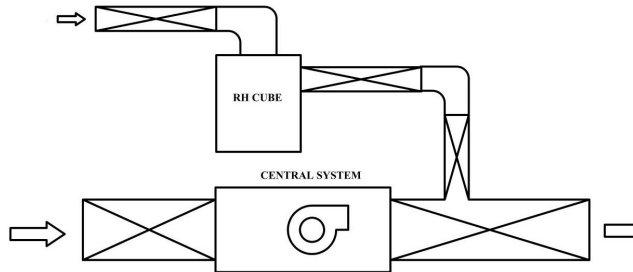
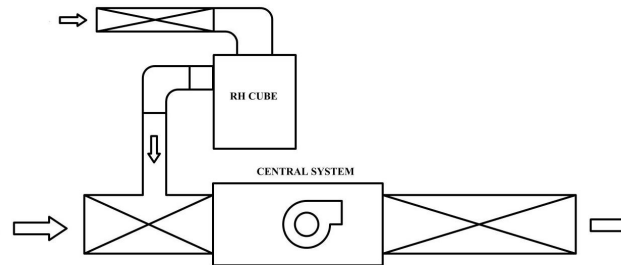
DUCTING

The four methods by which RH-Cubes can be integrated into an HVAC system are: Stand-alone, Series, Parallel, and Cascade. These methods are briefly outlined below. For details please refer to Dewair's application note on ducting.



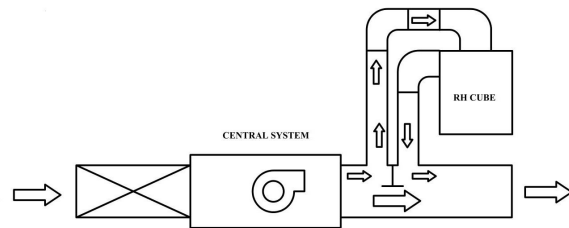
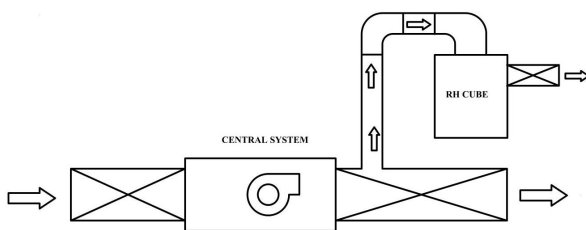
The **Stand-Alone** configuration is the most basic and requires the least amount of ducting. Air is drawn from the immediate surroundings and a simple ducting system connects the RH-Cube's delivery air to the living space.

The **Series** configuration joins the RH-Cube 18's delivery air the return air of the central system. Because this configuration lowers the dewpoint of the return air to the central system, it increases the likelihood of the central system's a/c to freeze up.



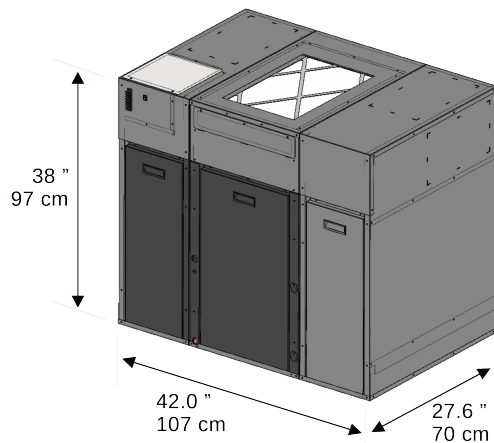
The **Parallel** configuration combines the RH-Cube 18's delivery air with the central system's delivery air.

For **Cascade** configurations, the RH-Cube 18's return air is taken directly from the delivery air of the central system. The RH-Cube 18's delivery air can either be ducted directly into the living space, or can be recombined with the central system's delivery air. These configurations deliver the highest performance.



SPECIFICATIONS

Part Number	DA-900-0003
Typical Power Consumption	340 Watts @ 80°F and 60% RH
Blower power, STP performance	336W (0.44 HP), 610 CFM @ 0" WG, 545 CFM@ 0.2" WG (50 Pascals), 500 CFM@ 0.35 WG (87 Pascals)
Supply Voltage, Cord	115 VAC - 1 phase, 60 Hz, 6 foot cord (grounded)
Power Circuit (Max Current Draw)	15 A breaker (Max draw 3.2A)
Drain connection	3/4" (19 mm) NTP threaded female
Control Device (not included)	Dehumidistat
Output Control Power	24 VAC up to 30 VA to power dehumidistat control
Blower Switch	Auto or always on
Return Duct (air into RH-Cube)	Required Minimum: 3 foot duct. Opening on top is 12" (30.5 cm) x 18" (46 cm)
Supply Duct (air out of RH-Cube)	Duct optional but recommended. Cutout choice on left, right, top, and back. 8" (20.5 cm) x 14" (35.6 cm)
Other blower duct system connect	Refer to installation manual for several options
Service Access Left Side	Connection pipes, electrical control, blower switch
Service Access Front	Evaporator coil, four heat exchangers, filter cover
Service Access Top	Electrical components box
Air Filter(standard recommended)	Camfil 24x16x2 30/30 MERV 8 Part # 049880-016
Filter Maintenance	Inspect every 1-2 months, replace every 3-4 months or as needed
Alternative Air Filter (premium)	Camfil 24x16x2 30/30 Dual 9 Part # 0406331-016
Equipment Weight, Ship Weight	Equipment 310 lbs (117 Kg), Ship 350 lbs (136 Kg)
Minimum maneuvering weight	Approx 110 lbs (50 Kg) If needed, the unit disassembles into three pieces for maneuvering in tight spaces
Equipment Dimensions (incl. pipes)	44.0" x 28.4" x 38.2" 112 cm x 72 cm x 97 cm
Shipping Dimensions	47.0" x 32.0" x 44.0" 120 cm x 82 cm x112 cm
Capacity	from 630 to 20,000 Btu/hr/15°F.T.D



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