

DEHUMIDIFICATION DIVISION

MODEL HC-150



OFF-THE-SHELF-DEHUMIDIFIER

ADVANTAGES

Cargocaire off-the-shelf desiccant dehumidifiers combine state-of-the-art desiccant technology with dependability and long operating life for humidity control at virtually any temperature. Advantages include:

- Efficient humidity control for applications including product drying, mold and mildew control, corrosion protection, storage and condensation control.
- Durable unitized body with welded aluminum construction.
- Easy access panel for inspection and maintenance.
- Simple ductwork connections.
- Compact, low profile design.

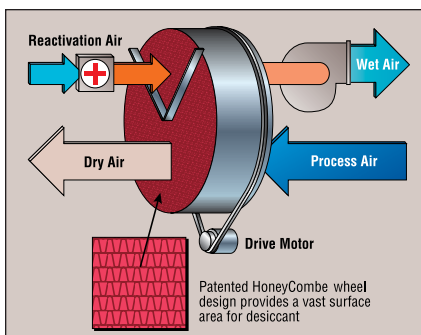
FEATURES

Process Air: Flow rates of 75-150 scfm. Nominal moisture removal: 3.9 lbs/hr at 75°F, 50% RH at 150 scfm. Capable of processing saturated, conditioned or outside air.

Contact Air Seals: Separate process and reactivation air streams. Compatible with modulating face and bypass systems.

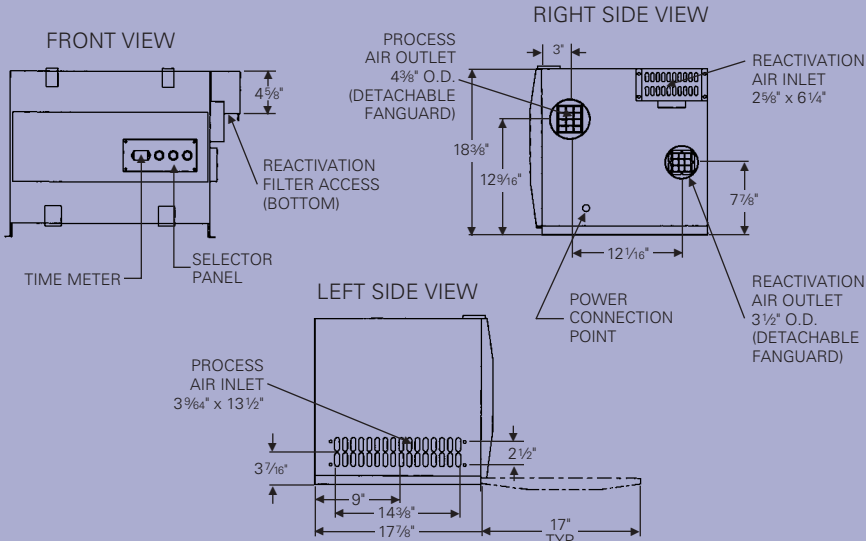
Electrical Controls: Automatic restart after power failure. Contacts for remote run and fault status. Elapsed time meter. Simplified controls using relay logic. 24 VAC signal wiring allows for low voltage wiring of humidistat. Control system monitors and controls unit function.

Drive System: Simple drive belt arrangement, few moving parts.



The Titanium Gel wheel is the most advanced of its kind. It contains an inert, non-corrosive, non-metallic, solid desiccant, manufactured to eliminate erosion, settling and attrition. The Honeycombe design maximizes the transfer of water in vapor phase and minimizes air friction loss through laminar air flow. The desiccant will not break down even if saturated with water.

MODEL HC-150-I



DIMENSIONS TABLE

Model	Max Length (in.)	Max Width (in.)	Max Height (in.)	Max Weight (lbs.)	Typical External Static Pressures (in. W.G.)	
					Process	React
HC-150-I	26	19 1/4	18 11/32	70	.75	0.15
HC-150-R	26	19 1/4	18 11/32	70	.75	0.15

Reactivation Utility: Energy modulation feature independently controls heater power to minimize energy consumption.

Dehumidifier Housing: Process and reactivation air flow insulation. Blower motors and controls isolated from air streams. Process and reactivation fan guards provided for safety. Volume control dampers for process and reactivation air streams. All welded aluminum cabinet. Compact size for minimum space requirements and easy installation.

SPECIFICATIONS*

Utilities:
 HC-150-I = 220 VAC ±10%/1/60Hz
 HC-150-R = 115 VAC ±10%/1/60Hz
 Process Volume: 75-150 scfm
 Max. Reactivation Volume: 55 scfm

Max Reactivation Heater:
 HC-150-I = 2.9kw @ 230 VAC
 HC-150-R = 1.5kw @ 115 VAC
 Maximum FLA:
 HC-150-I = 14.7A @ 230V/1/60Hz
 HC-150-R = 17.0A @ 115V/1/60Hz
 Max dBA: 75 (3 feet from dehumidifier except in path of air flows)
 Washable metal roughing filters

Options:

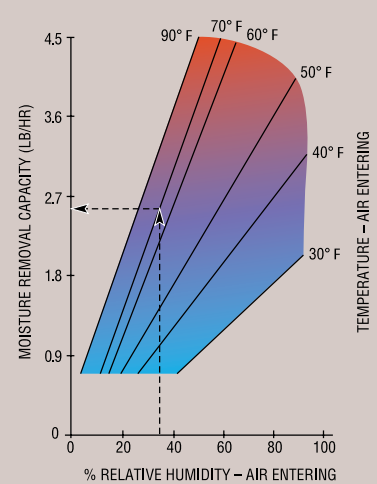
- Humidistat for on/off control
- Constant process blower
- Process inlet transitions for round duct
- Condensation controller

Suggested Specification Guide:

Dehumidifier shall be of a type proven in satisfactory operation for a minimum of ten years. Dehumidifier shall be of the non-cycling sorption type with a single desiccant rotary structure. The casing will be fabricated as a unitized body with welded aluminum construction for maximum strength and durability. Suitable access panel shall allow access for inspection or servicing without disconnecting ducting or electrical wiring. Airflow balancing dampers to be furnished.

The rotary structure shall be a monolithic fabricated extended surface composite consisting of inert silicates reinforced with uni-form diameter glass fibers for maximum

HC-150 PERFORMANCE



EXAMPLE:

Process air in at 35%RH and 70°F will hold space at 35%RH with a moisture load of 2.9 lbs/hr. To find the temperature of process outlet air (T_{P0}) solve:
 $T_{P0} = .9 (7.2W + T_{P1}) + 23$ where
 T_{P1} = temperature process inlet air °F

EXAMPLE:

$T_{P0} = .9 (7.2 \times 2.9 + 70) + 23$
 $T_{P0} = 105^\circ\text{F}$

* HC-150-R = 60% of HC-150-I capacity

strength. The fabricated structure shall be smooth and continuous in the direction of airflow without interruptions or sandwich layers which restrict airflow or create a leakage path at joining surfaces. Desiccant shall not channel, cake or fracture due to repeated temperature and moisture cycling. The materials of construction shall be non-toxic and NFPA 225-ASTM E84 compliant.

Full face contact pressure seals shall be provided to separate the process and reactivation air streams and eliminate detrimental leakage of air or moisture with static pressure differentials of up to 3" of water gauge.

Dehumidifier shall be factory assembled, fully automatic, complete with HoneyCombe desiccant wheel, reactivation heaters, reactivation energy control system, roughing filters, motors, fans, non-ratcheting desiccant drive unit, automatic controller and all components' auxiliaries. Reactivation Energy Modulation shall be stepless solid state proportioning type. Dehumidifier shall be functionally tested at the manufacturer's factory and shipped complete with all components necessary to maintain normal operation.

*Continual engineering and research for product improvement may result in design and specification changes. Consult factory for certified technical data.

CARGOCAIRE

ISO 9001 CERTIFIED

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