DEHUMIDIFYING DRYERS

CD Series Large Carousel Dryers
Electric Models CD600 to CD3200

CD-2400

CLOSED-LOOP DRYING WITH SUPERIOR PERFORMANCE

CD series high-capacity dryers deliver consistent, low-cost drying even in high humidity environments.

Our unique carousel design provides true-closed loop desiccant regeneration for energy-efficient, spike-free drying of hygroscopic plastics to a -40° dew point.

Large CD models can dry at temperatures ranging from 160° to 375° F. The full-featured Compu-Dry microprocessor control can be easily expanded to take advantage of additional energy-saving options. The standard control displays setpoint and actual temperatures, as well as alarm messages to help diagnose problems.

Large capacity central or machine-side drying

The large CD dryers are ideal for high-throughput central drying applications, and can also be used beside the process machine.

Air flow capabilities of the large CD models range from 360 CFM to 2300 CFM. These units can be used to satisfy throughput rates ranging from 450 to 6,000 lb/hour.

Large CD dryers can be used for central drying of one material, or multiple materials. Central CD dryer models, used with our hopper-mounted Heat Boosters, can dry multiple materials at different drying temperatures.

We also can supply any of our large CD dryers with gas-fueled process and regeneration heaters to increase your energy savings.

■ UNIFORM TEMPERATURE, DEW POINT

Our patented desiccant carousel eliminates dew point and temperature spikes. Multiple desiccant tanks present dry desiccant to the material drying circuit more frequently.

■ BETTER PARTS WITH LESS ENERGY

Carousel models use dehumidified air to cool the regenerated desiccant cartridges. This cooling cycle reclaims the residual heat of regeneration, and does not pre-load the desiccant with moist, ambient air like conventional dryers.

■ SMART, YET SIMPLE CONTROLS

Enter the drying temperature setpoint, and press the RUN button. The microprocessor control does the rest. The CD control features on-screen language prompts and diagnostic tools that alert you to drying problems.

■ EASY ACCESS, FAST MAINTENANCE

You don't need tools to clean our conveniently located process and regeneration filters. Replace desiccant cartridges or maintenance parts in minutes. Removing side panels is fast and easy with built-in handles and captive fasteners.

One Conair Drive ● Pittsburgh, PA 15202 ● 412-312-6000 ● FAX 412-312-6227 ● www.conairnet.com

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FEATURES

DEHUMIDIFYING DRYERS
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Electric Models CD600 to CD3200

STANDARD

- **Heavy-duty steel construction**
- **Expandable microprocessor control**
- **NEMA 12 control enclosure**
- **Allen-Bradley motor starters**
- **Fused electrical components**
  (Independently fused heater, motors and control circuit)
- **Lockable electrical disconnects**
- **Mercury displaced heater contactors**
- **Air flow and filter monitors**
  (standard on CD1600-CD3200; optional on other models)
- **Removable side access panels**
- **Convenient filter access**
- **Central peripheral or high pressure blower**
- **Gas-fueled models also available**
  Electricity costs too high? Get the same CD Carousel Dryer features and expandable Compu-Dry control in our economical, gas-fueled CDG models.

THE COMPU-DRY CONTROL

The Compu-Dry Control

The full-featured Compu-Dry control provides everything you'll need, from adjustable process setpoints to built-in diagnostics. The standard control also can be easily expanded to take advantage of such Conair energy-saving options as PowerMiser 1 and PowerMiser 2.

STANDARD

- **High visibility display with language prompts**
  The 40-character vacuum fluorescent display provides on-screen prompts for set up, operation and diagnosing dryer malfunctions.
- **Adjustable process temperature setpoints**
  Set temperatures from 150° to 375° F (66° to 121° C). Select temperature display in degrees Fahrenheit or Celsius.
- **Return air / regeneration temperature monitors**
  can alert you to regeneration and desiccant problems.
- **Auto start timer**
  sets an automatic start time for drying.
- **High/Low temperature lockout**
  prevents unacceptable changes to setpoint
- **Diagnostic and alarm messages**
  alert operator to dryer malfunctions.

AVAILABLE OPTIONS

- **Visual and/or audible alarms**
- **SPI / computer interface**
- **Air flow and filter monitors**
- **PowerMiser 1 dew point monitor**
  Regulates the regeneration cycle based on the dew point you set. The fully-adjustable, integral hygrometer can be set to dew points of -50° to 0° F (-46° C to -18° C).
- **Dual PowerMiser 1**
  Simultaneously displays setpoint and actual dew points, as well as process temperatures.
- **PowerMiser 2 energy saver**
  Minimizes power consumption by regulating the process heaters and air flow when drying at less than rated capacity.
- **Process protection**
  Provides adjustable high temperature safety shutoff for the process heat circuit.

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APPLICATIONS

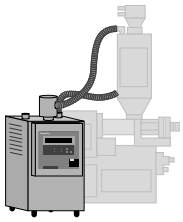
DEHUMIDIFYING DRYERS
CD Series Large Carousel Dryers
Electric Models CD600 to CD3200

Select the right dryer for your application

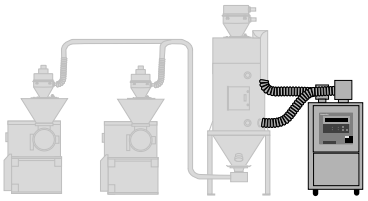
❶ **Identify the resin and throughput rate.** Use the chart below to quickly select the correct dryer model for your throughput rate.

❷ **Multiply the suggested drying time by your throughput rate to determine the hopper size.** Refer to Conair drying hopper specifications, or contact a Conair representative to determine the correct hopper for your application.

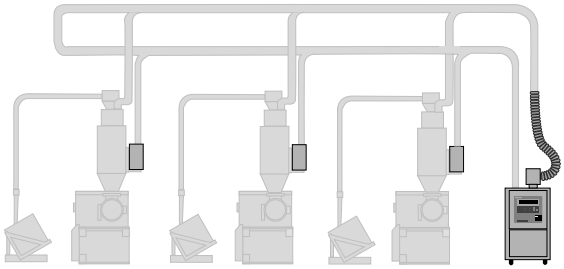
❸ **Select the dryer model and options to suit your application.** CD models can be used for individual station or central drying applications. High-heat models include an aftercooler and high-temperature heaters.



Individual station



Central drying, single material



Central drying, multiple materials with Heat Boosters

RECOMMENDED THROUGHPUTS

MATERIAL	DRYING TEMP / °F {°C}	DRYING TIME / HR	DRYER MODEL THROUGHPUT RATE / LB/HR					
			CD600	CD800	CD1000	CD1600	CD2400	CD3200
ABS	180 {82}	3–4	750	1150	1610	2300	3680	4600
Acetal	210 {99}	2	810	1240	1840	2480	3965	4955
Acrylic	160–180 {71–82}	2	780	1195	1840	2390	3830	4785
Barex	160 {71}	6	849	1285	1840	2575	4115	5140
Cellulosics	160 {71}	6	600	920	1285	1840	2940	3675
Ionomer	150 {66}	8	540	830	1275	1655	2645	3305
Nylon	160 {71}	6	660	1010	1425	2020	3240	4050
PC*	250 {121}	3–4	600	920	1410	1840	2940	3675
PE w/40% Black	195 {91}	3	540	830	1275	1655	2645	3305
PET*	325–375 {163–191}	4–6	450	690	1060	1435	2300	2875
PBT*	250 {121}	2–3	450	690	1060	1435	2300	2875
PETG	160 {71}	3–4	600	920	1410	1840	2940	3675
Polyamide*	250 {121}	2	600	920	1410	1840	2940	3675
Polyester Elastomer	225 {107}	3	600	920	1410	1840	2940	3675
PEM*	300 {149}	4	450	690	1060	1435	2300	2875
PES*	300 {149}	4	750	1150	1610	2300	3680	4600
PPS*	300 {149}	6	600	920	1410	1840	2940	3675
PP	195 {91}	1	600	920	1410	1840	2940	3675
PS (GP)	180 {82}	1	810	1240	1840	2480	3965	4955
PS (HI)	180 {82}	1.5	780	1195	1840	2390	3830	4785
Polysulfone*	250 {121}	4	600	920	1410	1840	2940	3675
PU	180 {82}	3	600	920	1410	1840	2940	3675
PPO*	255 {124}	2	600	920	1410	1840	2940	3675
Ryite*	250 {121}	2	450	690	1060	1435	2300	2875
Styrene (SAN)	180 {82}	2	810	1240	1840	2480	3965	4955
Vinyls (PVC)	160 {71}	2	975	1495	2140	2990	4780	5975

* The **high-heat model** is recommended for applications requiring drying temperatures over 250°F {121°C}.

APPLICATION NOTES:

Throughputs will vary by type of material. Consult Conair about throughput for materials that are not listed here.

When to use high-heat (H) models

You should select the high-heat dryer, if you are drying at temperatures over 250° F (121° C). High-heat (H) models are equipped with high-temperature heaters, aftercooler and insulated process hose.

When to use an aftercooler

The aftercooler reduces the temperature of air returning from the drying hopper, improving the efficiency of the desiccant. You should add an aftercooler if:

- You are drying at temperatures over 250° F (121° C).
- You are batch drying at temperatures over 160° F (71° C).
- Throughput rates are less than 50% of the dryer's rated capacity.

When to use central (C) models

Central CD dryers do not have process heaters. These models should be used when drying multiple materials that require different drying temperatures. Central models dehumidify the process air, which is then heated to the correct setpoint by hopper-mounted pre-heaters.

When to use additional filtration

The standard return air cartridge filter is sized for most applications. You should consider adding an optional dust collector and/or volatile trap if:

- The material is dusty or contains excessive regrind. An additional dust collector will extend time between filter cleaning.
- The material produces volatiles, a waxy or oily residue, when dried. For example, cellulosics will produce volatiles.

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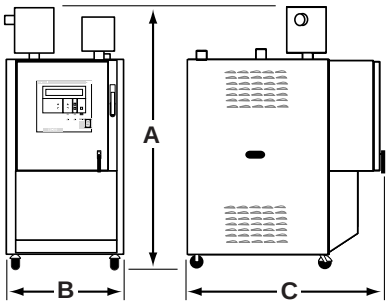
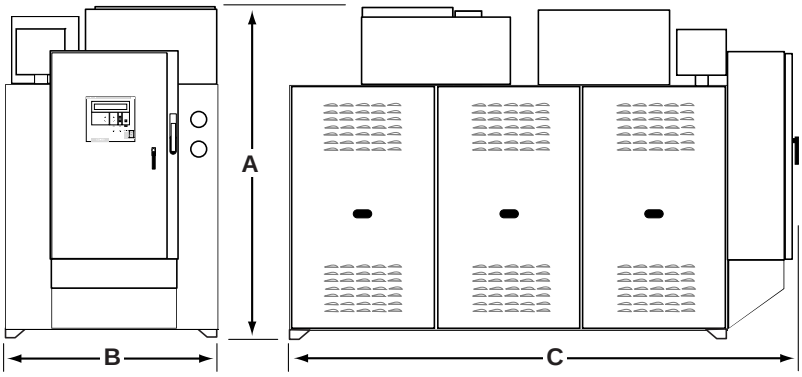
SPECIFICATIONS

DEHUMIDIFYING DRYERS
CD Series Large Carousel Dryers
Electric Models CD600 to CD3200

CD800 to CD1000



CD1600 to CD3200



MODEL	CD600	CD800	CD1000	CD1600	CD2400	CD3200
Performance characteristics						
Air flow ft³/min {m³/min}	360 {10.2}	600 {17.0}	925 {26.2}	1250 {35.4}	2000 {56.6}	2300 {65.1}
Drying temperature	STANDARD MODELS (A) 160° -250° F {71°-121° C}			HIGH HEAT MODELS (H) 160° -375° F {71°-191° C}		
Dew point	ALL MODELS -40° F {-40° C}					
Blower type	Peripheral Central	High Pressure Central				
Number of desiccant cartridges	5	5	5	5	10	10
Dimensions inches {cm}						
A - Height	71 {180.3}	72 {182.9}	94 {238.8}	82 {208.3}	94 {238.8}	100 {254.0}
B - Width	37 {94.0}	37 {94.0}	42 {106.7}	61 {154.9}	60 {152.4}	60 {152.4}
C - Depth	60 {152.4}	64 {162.6}	80 {203.2}	88 {223.5}	136 {345.4}	136 {345.4}
Delivery and return air line size, OD	5 {12.7}	5 {12.7}	8 {20.3}	8 {20.3}	12 {30.5}	12 {30.5}
Weight lbs {kg}						
A = standard / H = high heat	A H	A H	A H	A H	A H	A H
Shipping	1885 1985 {855} {900}	2380 2480 {1080} {1125}	2580 2680 {1170} {1216}	4550 4650 {2064} {2109}	6000 6200 {2722} {2812}	6500 7400 {2948} {3357}
Voltage Total Amps - Connected Load						
A = standard / H = high heat / C = central	A H C	A H C	A H C	A H C	A H C	A H C
380 V/3 phase/50 Hz	52.8 70.0 27.0	65.7 82.4 —	99.7 125.0 —	131.5 175.0 —	244.0 317.0 —	— — —
415 V/3 phase/50 Hz	57.9 76.5 28.0	71.7 90.1 —	106.6 134.2 —	143.6 191.0 —	267.0 347.0 —	— — —
480 V/3 phase/60 Hz	48.4 65.3 26.0	58.7 74.0 27.2	92.8 116.7 38.3	125.0 165.9 —	212.9 276.5 —	241.0 321.0 —
575 V/3 phase/60 Hz	45.0 57.5 21.0	47.3 60.0 21.9	75.4 94.4 31.0	94.7 126.4 —	163.0 217.0 —	— — —
Total Kilowatts kW	44.4 51.8 19.0	48.0 61.0 22	77.2 97.0 32.0	105.0 135.7 —	177.0 230.0 —	200.0 267.0 —
Water requirements {for aftercooler}						
Recommended temperature*	55°-70° F {13°-21° C}					
Water flow	4 - 6 GPM { 18 - 27 liters/min.} / Water connections: 1/2 in. NPT					

SPECIFICATION NOTES:

* CD dryer models are designated A, H or C to indicate whether the process circuit has been designed for standard (A), high-heat (H) or central (C) applications. C models do not have process heaters, and are designed for central drying applications that require drying multiple materials at different setpoint temperatures. Central models dehumidify the process air, which is then heated to the correct setpoint by Heat Boosters or pre-heaters mounted on the hopper. A or H models, which are equipped with process heaters, may be used when drying a single material at a central location for distribution to multiple processing machines.

† Water temperatures outside this range may affect dryer performance. If you have the optional high-efficiency aftercooler, you can use water at temperatures of 85°-90° F {29°-32° C}. Aftercooler water may be supplied by a tower, chiller or municipal source.

Specifications may change without notice. Consult a Conair representative for the most current information.

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