

## DEHUMIDIFYING DRYERS

### CDG Series Carousel Dryers Gas Models CDG400 to CDG3200



## SAVE ENERGY WHILE DRYING HIGH CAPACITY MATERIALS

CDG 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  $-40^{\circ}$  dew point.

All models are available in two temperature ranges - standard and high heat. 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.

## Low-cost Gas Drying with Patented Carousel

The CDG Series Carousel Dryers increase energy savings by utilizing lower-cost gas to dry your high throughput materials centrally or beside the process. Gas saves money over the equal amount of electricity.

Air flow capabilities of CDG models range from 300 CFM to 2300 CFM. These units can be used to satisfy throughput rates ranging from 345 to 6,000 lb/hour.

CDG dryers can be used for central drying of one material for distribution to multiple processing machines.

Choose the high heat models for drying temperatures above  $250^{\circ}$  F and up to  $375^{\circ}$  F while delivering low dewpoints.

### ■ 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.

## FEATURES

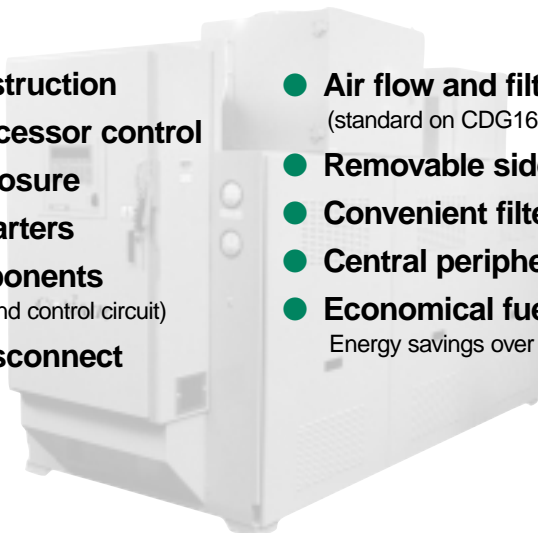
## DEHUMIDIFYING DRYERS

### CDG Series Carousel Dryers

### Gas Models CDG400 to CDG3200

#### STANDARD

- Heavy-duty steel construction
- Expandable microprocessor control
- NEMA 12 control enclosure
- NEMA sized motor starters
- Fused electrical components  
(Independently fused motors and control circuit)
- Lockable electrical disconnect
- Air flow and filter monitors  
(standard on CDG1600-CDG3200; optional on other models)
- Removable side access panels
- Convenient filter access
- Central peripheral or high pressure blower
- Economical fuel savings  
Energy savings over the cost of electric 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 the Conair energy-saving option of the PowerMiser 1.

#### 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  
Uses a real-time clock to set 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.
- Process protection  
Provides adjustable high temperature safety shutoff for the process heat circuit.

## APPLICATIONS

# DEHUMIDIFYING DRYERS

## CDG Series Carousel Dryers

### Gas Models CDG400 to CDF3200

*Select the right  
dryer for your  
application*

- 1 Identify the resin and throughput rate.** Use the chart below to quickly select the correct dryer model for your throughput rate.
- 2 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.
- 3 Select the dryer model and options to suit your application.**  
CDG models can be used for individual station or central drying applications. High-heat models include an aftercooler and high-temperature heaters.

RECOMMENDED THROUGHPUTS									
Material	Drying Temp °F {°C}	Drying Time, hr	Throughput Rate, LB/HR						
			CDG400	CDG600	CDG800	CDG1000	CDG1600	CDG2400	CDG3200
ABS	180 {82}	3-4	575	750	1150	1610	2300	3680	4600
Acetal	210 {99}	2	620	810	1240	1840	2480	3965	4955
Acrylic	160-180 {71-82}	2	595	780	1195	1840	2390	3830	4785
Barex	160 {71}	6	640	849	1285	1840	2575	4115	5140
Cellulosics**	160 {71}	6	460	600	920	1285	1840	2940	3675
Ionomer	150 {66}	8	410	540	830	1275	1655	2645	3305
Nylon	160 {71}	6	505	660	1010	1425	2020	3240	4050
PC*	250 {121}	3-4	460	600	920	1410	1840	2940	3675
PE w/40% Black	195 {91}	3	410	540	830	1275	1655	2645	3305
PET*	325-375 {163-191}	4-6	345	450	690	1060	1435	2300	2875
PBT*	250 {121}	2-3	345	450	690	1060	1435	2300	2875
PETG	160 {71}	3-4	460	600	920	1410	1840	2940	3675
Polyamide*	250 {121}	2	460	600	920	1410	1840	2940	3675
Polyester Elastomer	225 {107}	3	460	600	920	1410	1840	2940	3675
PEM*	300 {149}	4	345	450	690	1060	1435	2300	2875
PES*	300 {149}	4	575	750	1150	1610	2300	3680	4600
PPS*	300 {149}	6	460	600	920	1410	1840	2940	3675
PP	195 {91}	1	460	600	920	1410	1840	2940	3675
PS (GP)	180 {82}	1	620	810	1240	1840	2480	3965	4955
PS (HI)	180 {82}	1.5	595	780	1195	1840	2390	3830	4785
Polysulfone*	250 {121}	4	460	600	920	1410	1840	2940	3675
PU	180 {82}	3	460	600	920	1410	1840	2940	3675
PPO*	255 {124}	2	460	600	920	1410	1840	2940	3675
Rynite*	250 {121}	2	345	450	690	1060	1435	2300	2875
Styrene (SAN)	180 {82}	2	620	810	1240	1840	2480	3965	4955
Vinyls (PVC)	160 {71}	2	745	975	1495	2140	2990	4780	5975

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

\*\* Cellulosics and some other hygroscopic materials require the addition of a plasticizer trap on the return air line.

## 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.

**Choose an aftercooler** to reduce the temperature of air returning from the drying hopper, improving the efficiency of the desiccant if:

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

**Add optional filtration if:**

- the material is dusty or contains excessive regrind.
- the material produces volatiles, a waxy or oily residue, when dried.

# SPECIFICATIONS

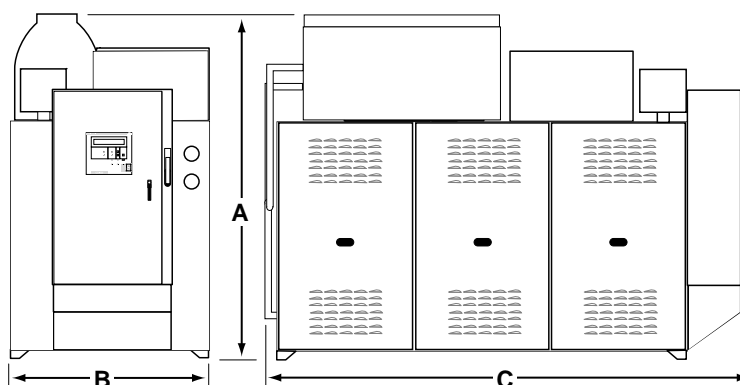
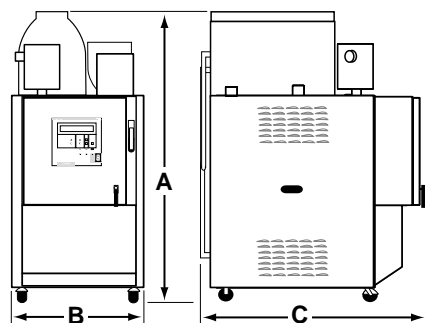
## DEHUMIDIFYING DRYERS

### CDG Series Carousel Dryers

### Gas Models CDG400 to CDG3200

#### CDG1000 to CDG3200

CDG400 to CDG800



MODEL	CDG400		CDG600		CDG800		CDG1000		CDG1600		CDG2400		CDG3200	
Performance characteristics														
Air flow ft <sup>3</sup> /min {m <sup>3</sup> /min}	300 {8.5}		360 {9.9}		600 {17.0}		925 {26.2}		1250 {35.4}		2000 {56.6}		2300 {65.1}	
Combustion air volume (SCFM)	A	H	A	H	A	H	A	H	A	H	A	H	A	H
A = standard, H = high heat	26	37	35	52	51	69	70	106	90	139	153	230	162	242
Drying temperature	STANDARD MODELS (A) 160° -250° F {71°-121° C} HIGH HEAT MODELS (H) 250° -375° F {121°-191° C}													
Dew point	-40° F {-40° C}													
Desiccant cartridges, number	4		5		5		5		5		10		10	
Dimensions inches (cm)														
A - Height	84 {213}		74 {188}		82 {208.3}		98 {249}		102 {259}		110 {279}		100 {254}	
B - Width	36 {91}		48 {122}		48 {122}		48 {122}		60 {152}		60 {152}		60 {152}	
C - Depth	52 {132}		80 {203}		88 {224}		88 {224}		94 {239}		144 {366}		136 {345}	
Exhaust Flue Diameter	A	H	A	H	A	H	A	H	A	H	A	H	A	H
A = standard, H = high heat	2.5 {6.4}	2.5 {6.4}	2.5 {6.4}	3 {7.6}	2.5 {6.4}	3 {6.4}	3 {7.6}	3.5 {8.9}	3.5 {8.9}	5 {12.7}	5 {12.7}	5 {12.7}	5 {12.7}	5 {12.7}
Weight lbs {kg}														
A = standard, H = high heat	A	H	A	H	A	H	A	H	A	H	A	H	A	H
Shipping	1450 {658}	1550 {704}	2900 {1317}	3000 {1362}	2890 {1312}	2990 {1357}	2630 {1194}	2730 {1239}	4830 {2193}	4930 {2238}	6750 {3065}	6850 {3110}	8030 {3646}	8130 {3691}
Installed	1250 {568}	1350 {613}	2700 {1226}	2800 {1271}	2790 {1267}	2890 {1312}	2430 {1103}	2530 {1149}	4430 {2011}	4530 {2057}	6250 {2838}	6350 {2883}	7530 {3419}	7630 {3464}
Voltage Total Amps <sup>±</sup> - Connected Load														
380 V/3 phase/50 Hz	12		16		19		21		30		46		----	
415 V/3 phase/50 Hz	11		14		18		19		27		42		----	
240 V/3 phase/60 Hz	18		24		30		32		46		72		----	
480 V/3 phase/60 Hz	9		12		15		16		23		36		40	
Total Kilowatts <sup>±</sup> kW	5.0		6.4		8.2		10.0		12.1		15.1		19	
Maximum gas flow CFH of gas based on 1000 BTUH/FT <sup>3</sup>														
	77		102		140		204		270		455		502	
Water requirements <sup>†</sup> {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:

\* CDG dryer models are designated A (standard applications), and H (high-heat applications).

† 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.

‡ Kilowatt and amperage rating are for peak loads during regeneration only.

The Conair CDG Series Large Carousel Dryers are classified under the National Fuel Gas Code [ANSI Z233.1] as a Category III gas appliance. An exhaust flue is required to vent the combustion gases produced by this appliance. The purchaser is responsible for installing an exhaust flue that meets all local, regional and national codes in the installation area. For your safety, consult a licensed mechanical contractor who is familiar with gas flue and ducting codes in your area.

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