Wide Range of Controls: Intuitive Drying

The new DC-T control measures 8-inches diagonally and features bright, crisp, high-resolution graphics. Individual screens show how your process is running and ways to improve it. Plus, you can now control and monitor process heat from the dryer!

With three new models in this range, processors can more closely match dryer capacity to process throughput. Purchase this dryer and you will find that you have more control over drying dewpoint and temperature than ever before, in a package that is simpler, smaller, lighter, more energy efficient, easier to use and maintain than any other dryer on the market today.

Model W2000
Shown with optional DC - T control

Large Capacity Central or Machine-Side Drying

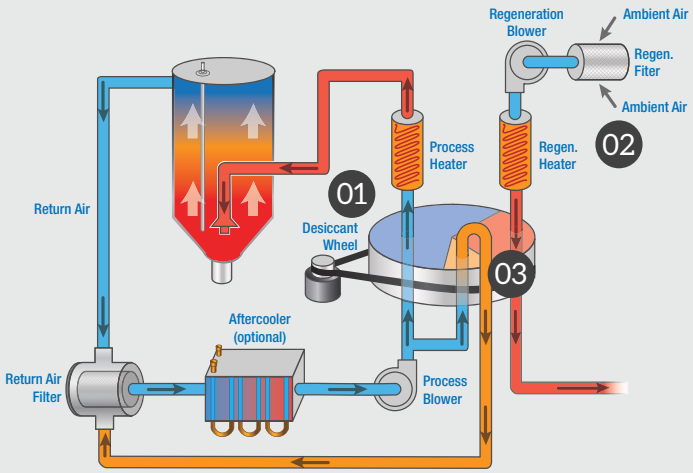
The Carousel Plus Dryer Series is now offered with TouchView™ Technology featuring full-color touchscreen controls. DC-T dryer controls display critical process settings and actual data on an 8-inch touchscreen graphical layout. At a glance you see everything going on in your drying system and can make adjustments with a touch of your fingertip for more efficient drying, better product quality and more profit on your bottom line. Warning messages are now easy to read with the elimination of cumbersome alarm codes. Password security prevents unauthorized drying parameter changes. With DC-T, your control is web-enabled, so you can connect wirelessly with your tablet or smartphone.

This series of dryers are capable of delivering nominal throughput rates ranging from 600 to more than 5,000 lb/hour {272 to 2,268 kg/hr}.

- **Easy-to-use, optional full-color touchscreen**
  Intuitive screen navigation will allow you to easily view critical drying parameters such as dewpoint and temperature.
- **Reduced energy costs**
  The desiccant wheel assembly heats and cools more easily than previous drying technology saving you up to 35% on your energy bill. Fewer parts, lighter structural mass, less to heat, therefore less wasted energy.
- **Maximum uptime, maximum reliability**
  With significantly reduced part count, easy access and less wear, you can expect many years of trouble-free operation. The weight of the desiccant assembly has been reduced by 70%, the part count reduced by 90%, there are no more indexing bed plates, no more cumbersome 4-way valves and no more messy desiccant beads.
- **Precise, adjustable dewpoint control**
  An industry first! The dewpoint control option built into the microprocessor control system allows you to select a particular dewpoint value, which the control locks onto. The control then adjusts various dryer functions to precisely hold the dewpoint selected, virtually eliminating any chance of overdrying expensive material.

How it Works

The core of the Carousel Plus Dryer is the Munters® unique fluted desiccant rotor, which contains molecular sieve desiccant. The molecular sieve has been grown into the rotor's porous fiberglass substrate, preventing the possibility of desiccant break down and dusting over time. The desiccant rotor revolves slowly, passing through three cycles with each revolution.



Note: Dryers W600-W5000 that are central dryers do not have process heaters. Heater Packs, Hopper Temperature Controllers (HTC's), or GasTrac Dryers (CGT's) are used at the hopper for heating the process air.

The Benefits

- The high airflow across the surface area of the rotor produces a resin-drying low dewpoint within 5 minutes of start-up and offers multiyear media life with virtually no maintenance.
- The continuously revolving rotor provides rock steady temperature and dewpoint control.
- The rotor technology minimizes energy consumption by reducing the structural mass; less structural mass to heat means less energy wasted.

01

First, the dry air is dehumidified in the adsorption cycle, capturing and removing moisture from the drying air stream.

02

Next, the desiccant passes into the high temperature regeneration cycle where the absorbed moisture is heated and purged out of the desiccant to the atmosphere.

03

The desiccant is then advanced to the post-regeneration cooling cycle and cooled with closed loop dry air. All Carousel Plus Dryers feature this unique closed loop cooling technology to eliminate moisture that can cause defects in parts.

Which package is right for you?

Standard Packages	MX	MZ	HY	AD	SD	TV
Features						
DC-1 control	●	●				
DC-2 control			●			
DC-T control						●
Allen-Bradley TouchView control				●		
Siemens TouchView control					●	
Audible and visual alarms		●	●			●
Temperature setback		●	●	●	●	●
Dewpoint monitor		●	●	●	●	●
Dewpoint control		●	●	●	●	●

Standard Packages	MX	MZ	HY	AD	SD	TV
Options						
Communications			○	○	○	○
Audible and visual alarms				○	○	
Trending screens				○	○	
Recipe storage screens				○	○	
Conveying control screens				○	○	
Precooler	○	○	○	○	○	○
Volatile trap	○	○	○	○	○	○
Filter check	○	○	○			○
Heat current monitor			○			
Drying Monitor			○			○

● Standard ○ Option

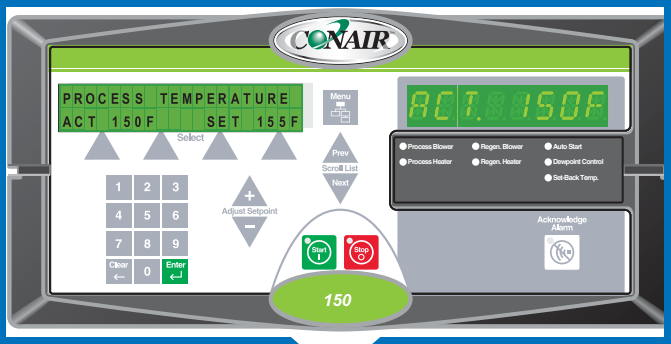
Feature Descriptions

- **Audible and visual alarm -** A combination of a blinking red alarm light and a horn alert the operator to any shut down alarm.
- **Temperature setback -** Automatically reduces the drying temperature to a lower standby mode when the machine throughput is reduced or stopped.
- **Dewpoint monitor -** Allows the operator to monitor the performance of the dryer by providing a digital dewpoint readout of the drying air.
- **Dewpoint control -** Allows the dryer to lock onto and track an operator selected dewpoint level. This feature helps prevent over drying of moisture sensitive materials such as Nylon. The Carousel Plus is the first dryer in the plastics industry to provide precise dewpoint control.
- **Precooler -** To achieve and maintain very low drying temperatures, a pre-cooler can be supplied to assure the supply air to the hopper is not heated by the heat of the dryer's blower, residual heat from regeneration, etc.
- **Volatile Trap -** Allows the operator to monitor the performance of the dryer by providing a digital dewpoint readout of the drying air.
- **Filter check -** Keeps the drying system's air flow optimized by monitoring the filter condition through automatic differential pressure measurements on each side of the filter. An alarm indicates when it's time for cleaning.
- **Drying Monitor -** Automatically monitors the temperature profile inside the drying hopper(s) within a pre-set temperature band to protect from over drying or under drying your material.
- **Communications -** Allows the dryer to be networked to industrial control systems. When a dryer is connected to a network, the controller on the network may read actual temperatures, change set points, read dryer status, and process and display this information at a central location.

Choose the control you need... DC - 1, DC - 2 or DC - T

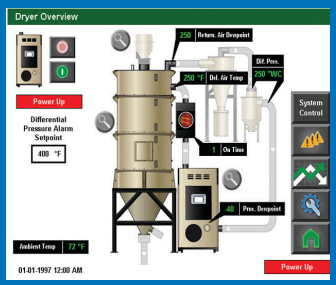
DC - 1 Control Features

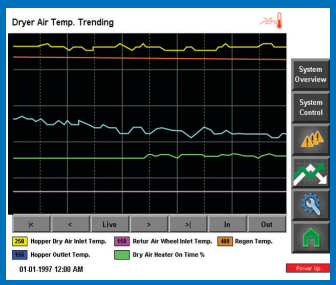
- 6-character, 7-segment LED display for high visibility of setpoint and actual operating parameters
- Full access to setup parameters and alarms through error codes
- Autostart count down timer
- Operator password protection
- English / metric units
- Solid-state heater contactors with isolation protection
- Return air temperature display



DC - 2 Control Features

- LCD (2 X 20 character) alphanumeric display with access to setup parameters, full diagnostics, alarm/event log and numerous options
- 8-character, 14-segment LED display for high visibility of selected parameter status
- Keypad for easy operator access
- Real time clock
- Temperature setback
- Operator password protection
- Date format selection
- English / metric units
- Return air temperature display
- Solid-state heater contactors with isolation protection



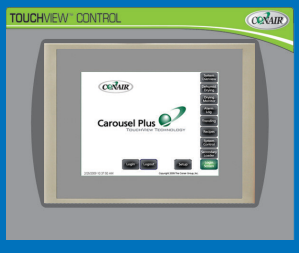


DC - T Control Features

- 8-inch color touchscreen
- Web-enabled
- Trending - air temperature and dewpoint
- Password protected (multiple level)
- English / metric units
- Return air temperature display
- Real-time clock - time of day
- Auto start
- Date format selection
- Temperature setback
- Solid-state heater contactors with isolation protection
- Multiple hopper control
- The DM3-e is the latest generation of technology created for analyzing drying performance from a multi-zone, resistance temperature detector (RTD) probe installed in the drying hopper. Embedded into the DC-T dryer control software, the DM3-e is designed to provide early detection of poor drying conditions and provide alarms for correcting problems. Up to 15 hoppers can be monitored.

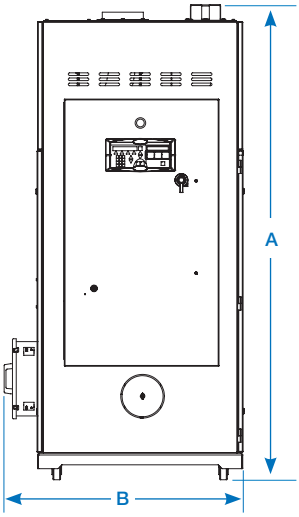
Note: Also available with Allen-Bradley or Siemens platform

Allen-Bradley control

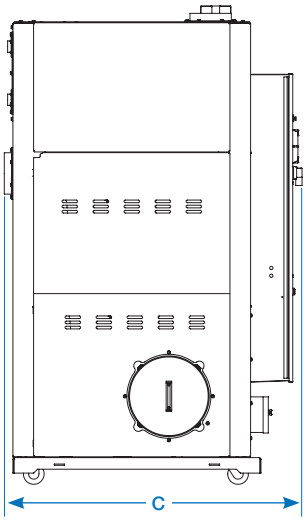


Siemens control

Specifications



Front view



Side view

Application Notes

All dryers are supplied with an aftercooler/intercooler as standard. The aftercooler/intercooler reduces the temperature of the return air from the drying hopper, improving the efficiency of the desiccant. The aftercooler/intercooler should be connected with the proper water flow rate and temperature to attain the optimal throughput.

When to use central models
Central 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 a Hopper Temperature Controller (HTC) or a "pre-heater" mounted on the hopper.

When to use additional filtration
The standard return air cartridge filter is sized for the airflow of each dryer model and is suited for most applications. You should consider adding an optional dust collector and/or volatile trap if:

- The material contains excessive fines. An additional dust collector or cyclone will extend time between filter cleaning.
- The material produces volatiles during drying which condense into a waxy or oily residue. A volatile trap will help to protect the desiccant.

Models	W600*	W800*	W1000*	W1300*	W1600*	W2000*	W2400*	W3200*	W4000*	W5000*
Performance characteristics (with full hopper)										
Drying temperature	All models 100° - 375°F {38° - 191°C} with options									
Dewpoint	All models -40°F {-40°C}									
Dimensions inches {cm}										
A - Height	93.8 {238.3}			92.2 {234.2}				98.3 {249.7}		
B - Width	49.3 {125.2}			53.9 {136.9}				58.2 {147.8}		
C - Depth	63.1 {160.2}			97.5 {247.6}				112.9 {286.7}		
Outlet/inlet hose diameter	8.0 {20.3}			12.0 {30.5}						
Approximate weight lbs {kg}										
Installed	1300 {590}		1400 {636}	1600 {726}				2000 {907}		
Shipping	1495 {678}		1515 {687}	2620 {1188}				3385 {1535}		
Voltage - standard/central full load amps† ‡‡										
400 V/3 phase/50 Hz‡	89.2 / 34.3	115.9 / 33.5	116.6 / 34.2	152.7 / 42.9	159.4 / 49.6	213.7 / 76.4	248.7 / 84.0	282.7 / 90.5	371.3 / 96.8	371.9 / 97.4
460 V/3 phase/60 Hz	77.6 / 29.8	100.9 / 29.2	101.5 / 29.8	133.4 / 37.8	138.6 / 43.0	186.4 / 66.9	216.5 / 73.1	247.3 / 80.0	323.0 / 84.0	323.7 / 84.7
575 V/3 phase/60 Hz	62.1 / 23.9	80.7 / 23.4	81.1 / 23.8	106.6 / 30.2	110.8 / 34.4	149.1 /53.6	173.0 / 58.4	197.7 / 64.0	258.1 / 67.1	258.7 / 67.7
Water requirements (for aftercooler or optional precooler)§										
Recommended temperature**	45° - 85°F {7° - 29°C}									
Water flow gal./min. {liters/min.}	6 - 25 {22.7 - 94.6}††			12 - 40 {45.4 - 151.4}††				15 - 50 {56.8 - 189.3}††		
Water connections NPT	1 1/2 inch									

Specification Notes

* Dryers W600-W5000 that are central dryers do not have process heaters. Heater Packs, Hopper Temperature Controllers (HTC's), or GasTrac Dryers (CGT's) are used at the hopper for heating the process air. See the Hopper Temperature Controller (HTC) and GasTrac Dryer (CGT) specification sheets for further technical information. Even though Heater Packs are remote from the dryer, they are controlled by the dryer.

† The first full load amps number listed includes current to operate the dryer and the heat supply controlled by the dryer. The second full load amps number is current required for the dryer only, when operated as a central dryer with heaters (more than one) controlled and powered remotely.

‡ Dryers running at 50 Hz will have 17% less airflow, and a 17% reduction in material throughput.

§ When drying below 150°F {66°C} a precooler is required.

** Temperatures above or below the recommended levels may affect dryer performance. Tower, chiller or municipal water sources can be used.

†† Higher chilling water temperatures will require a greater flow rate.

‡‡ FLA data for reference purposes only. Does not include any options or accessories on equipment. For full FLA detail for power circuit design of specific machines and systems, refer to the electrical diagrams of the equipment order and the nameplate applied to the machine.

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

Installation Note

Wiring between process air heater, Heater Pack, and dryer where control for this heater is located is not included. Maximum wire length between dryer and heat source is 100 feet {30 meters}. Consult Conair or a qualified electrician to determine gauge of wire required for distance. Maximum physical distance between dryer and hopper is 20 feet {6 meters}.