CCR Crystallizers provide trouble-free conversion of amorphous PET resin into a crystallized form, in preparation for drying.

NOVATEC CCR systems are designed to provide constant temperature hot air at the rate of up to 1 cfm/lb./hr. (0.77m³/kg/hr.) Typical process temperatures range between 250-350°F. (121-177°C) and residence time is typically one hour.

- **Reliable Material Flow**
  A robust agitating hopper, direct-coupled to a gear-reduced drive motor assures reliable material flow through the crystallization process while specially outfitted material supply and take away components assure continuous operation.

- **Electric Heater/Blower**
  The frame mounted agitating hopper is fitted with a hopper-mounted heater/blower module.

- **Gas-Fired Process Heater Option**
  This popular option can reduce energy savings by 20-40%.

- **Clean Operation**
  System includes a separate cyclone filter that traps and collects carry-over fines for a clean operation.

- **Bridging & Agglomeration Prevention**
  Large automatic knife gate eliminates bridging of regrind or flake and prevents agglomeration of amorphous material in vacuum receiver due to hot air exposure from crystallizer.

- **Hinged Hopper Door with Safety Interlock**
  Stops agitator to avoid accidental injury.

- **NovaTouch™ PLC Control in NEMA 12 Enclosure**
  Built-in interface with all Novatec MCS control systems.

**Plus:**
- Stainless steel vacuum receiver
- Multiple sight glasses on hopper
- Air inlet, outlet and hopper temperature sensors
- Rotary airlock on hopper discharge
- Enclosed surge bin with take-off box
- High and low material level sensors automatically prevent over-filling of crystallizer and indicate low material level
- 3” of energy-saving insulation surround the lid, upper body and cone of the Hopper
- 460V/3ph/60Hz
- 1-Year warranty

Custom gear drive slide gate standard on CCR-1500 through CCR-4000
Look closely at a NOVATEC CCR System…

...to see the standard features that make your crystallization process run efficiently with uncomplicated reliability!

- Air purge for vacuum receiver assists discharge of hard-to-flow materials
- Slide gate with positive shut-off prevents agglomeration in vacuum receiver
- Direct coupled gear reduced drive and motor assembly. (no belts or chains) runs at low speeds to prevent material agglomeration and degradation
- “Energy-Saver” thermocouple automatically reduces temperature if material flow is reduced
- Process air inlet filter included on open loop systems
- Fill tube reduces carryover
- Process heater/blower with high efficiency centrifugal blower and tubular heaters with Incoloy® sheath is mounted on the side of the hopper or mounted on a stand if necessary
- Heavy duty agitator shaft and breaker bars. Chamfered edges on agitator bars allow smooth flow of blade through material
- Process high temperature limit switch included
- Static agitator blades break up clumps in amorphous feed stock
- High temperature self-lubricating lower shaft bearing minimizes maintenance and eliminates shaft distortion and side-loading of upper bearing
- Tripod jack-screw center bearing holder allows precise shaft alignment
- Winglets on rotating bars enhance agitation
- 70° Diffuser cone ensures plug flow of material
- Agitator shaft goes deep into cone discharge area to minimize bridging.
- Manual slide gate
- Constant rate discharge is provided by a rotary air lock
- Vacuum take-off box with hinged access door for easy clean out (multiple probes optional)
The NovaTouch™ PLC Is Standard

This standard user-friendly controller interfaces with all NOVATEC MCS system controllers.

- Easy-to-read touch screen
- Built-in prompts simplify use
- Components available locally
- Greater reliability than standard microprocessor controls
- Issues warnings on process & system failures and holds memory of up to 10 error messages with time and datestamp record of operator acknowledgement
- Alarm re-sets upon correction of condition
- Real-time clock with 7-day timer

CUSTOM CONTROLLER OPTIONS:
- EEPROM memory cartridge option
- Modem option allows diagnostics and re-programming of equipment from a remote location
- Multiple communications platforms including Modem, Modbus, Profibus, MPI, Ethernet and ASI
- Battery back-up for real-time clock

Specifications*

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Standard voltage 460V/3ph/60Hz

Optional voltage 575V/3ph/60 Hz (Specify as separate line item on order).

*Dimensions may vary depending on specific system requirements and options.

CYCLONE DUST COLLECTOR

- Cyclonic action catches up to 99% of fines that would normally clog a cloth filter
- High-efficiency dust bag collects remainder of fines
- Quick-release clamps on air tight collection pan allow easy access for disposal of fines

Accessories:
- Cartridge filter kit
- Cyclone collection drum

Note: See separate data sheet on Cyclone Dust Collectors
Custom Crystallizer Options:

Note that all custom features will be priced accordingly and lead times will be extended beyond those of standard packages and accessories.

- Audible alarm horn or light
- Stainless steel hopper
- Stainless steel agitator and breaker bars
- Cooling hopper for storing crystallized resin
- Closed loop system with insulated pulse-clean filter
- Pneumatic or gear drive slide gate on hopper discharge
- Installation & start-up training
- Custom gear-driven slide gate optional on models CCR-100 through CCR-1000

* Gas Fired Process Heater - Custom Option

- Up to 90+% thermal efficiency can produce 20-40% energy savings over electric heaters
- Safe, indirect gas heating isolates process from hot gas
- Process air temperature adjustable from 160-400°F (71-204° C)
- Stainless steel combustion chamber
- NFPA-86 gas train standard or optional IRI
- UL/C-UL listed flame control panel with main disconnect switch as standard

* See separate data sheet

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Standard Open Loop CCR System With Integral Heater-Blower

Open-Loop and Closed-Loop configurations are available with either an electric or gas-fired process heater.

Custom Energy-Saving Closed loop CCR System

Inquire about our Infrared Crystallizer/Dryer for even greater energy savings!