CONTINUOUS PET CRYSTALLIZER SYSTEMS
50 - 4000 lb./hr. (23-1818kg/hr.)
Larger capacities custom engineered

Novatec Continuous Crystallizer Systems provide efficient conversion of amorphous PET resin into a crystallized form for further processing. The system consists of a double - insulated hopper with an internal agitator which prevents agglomeration during crystallization. A high-efficiency heater-blower maintains the continuous temperature required for the crystallization of amorphous resin. The NovaTouch™ Touch Panel PLC with multiple communication options, is included. Choose a standard Novatec design or we will custom-engineer a Crystallizer System to satisfy unique requirements.

Novatec CCR Systems are designed to provide constant temperature hot air at the rate of 1 cfm/lb./hr. (.77 m³/kg/hr.)

Typical process temperatures range between 250-350°F (121-177°C) and residence time is typically one hour.

Bulk density of the materials being processed generally range from 22 lb./ft.³ for regrind, to 54 lb./ft.³ for virgin pellets. (352-865 kg/m³)

• Electro-polished Stainless Steel Vacuum Chamber
• Large automatic knife gate eliminates bridging of regrind or flake and prevents agglomeration of amorphous material in vacuum chamber due to hot air exposure from crystallizer
• Energy-Saver Thermocouple automatically reduces temperature if material flow is reduced
• Multiple sight glasses on hopper for ease of viewing process
• Hopper has a hinged access door with a safety interlock device which stops agitator to avoid accidental injury
• Material Flow Control Thermocouple ensures proper material temperature before discharge
• 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 - protected by steel skin
• NovaTouch™ Touch Panel PLC Control with multiple communications options
• NEMA 12 enclosure
• Closed Surge Bin includes high-level control
• Tubular Steel Mounting Stand to suit installation requirements

GAS FIRED PROCESS HEATER - Option

• Up to 90+% thermal efficiency can produce significant 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 (patent# 6044837) NFPA-86 gas train standard or optional IRI
• UL/C-UL listed flame control panel with main disconnect switch as standard.
• Other code options available.

INSTALLATION & STARTUP TRAINING - Option

Trust the installation of your Novatec Crystallizer Systems to an experienced Novatec Installation Crew then have a Novatec Service Tech start the system and train your personnel about the operation of the equipment.

All Novatec CCR Systems include the quality standard features shown but we can customize each Crystallizer System with options to suit your needs.

CRYSTALLIZER OPTIONS:
• Audible alarm horn or light
• Vacuum loader with pick-up lance
• 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

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All information in this bulletin is subject to change without notice.
Look closely at a Novatec CCR System to see the features that make your crystallization process run efficiently with uncomplicated reliability!

- Air purge for Vacuum Chamber assists discharge of hard-to-flow materials
- Energy-Saver Thermocouple automatically reduces temperature if material flow is reduced
- Direct coupled gear reduced drive and motor assembly. (no belts or chains) Runs at low speeds to prevent material agglomeration and degradation
- 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
- Process High Temperature Limit Switch included
- Heavy duty agitator shaft and breaker bars. Chamfered edges on agitator bars allow smooth flow of blade through material.
- 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 agitator 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™ Touch Panel PLC is the standard for Novatec CCR Systems

This user-friendly controller interfaces with any Material Handling System and is available with multiple communication options including Modem, Modbus, Profibus, MPI, Ethernet (with or without embedded web page) DeviceNet, Canbus and AS-I.

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

OPTIONS:
- EEPROM memory cartridge option
- Modem option allows diagnostics and re-programming of equipment from a remote location
- Multiple communications platforms

CYCLONE FILTER with Collection Pan and Filter Sock included for process air discharge

- 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 collection pan allow easy access for disposal of fines

OPTION: Large capacity filters for very dusty regrind.