

Continuous PET Crystallizer System

100 - 4000 lb./hr. (45-1818kg/hr.)
Larger capacities custom engineered



NOVATEC continuous crystallizer systems provide efficient conversion of amorphous PET resin into a crystallized form for further processing. Choose either a standard NOVATEC design or a custom-engineered crystallizer system to satisfy your unique requirements.

Standard Features

- 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
- 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
- 460V/3ph/60Hz
- Closed surge bin includes high-level control
- Tubular steel mounting stand to suit installation requirements
- 2-Year warranty

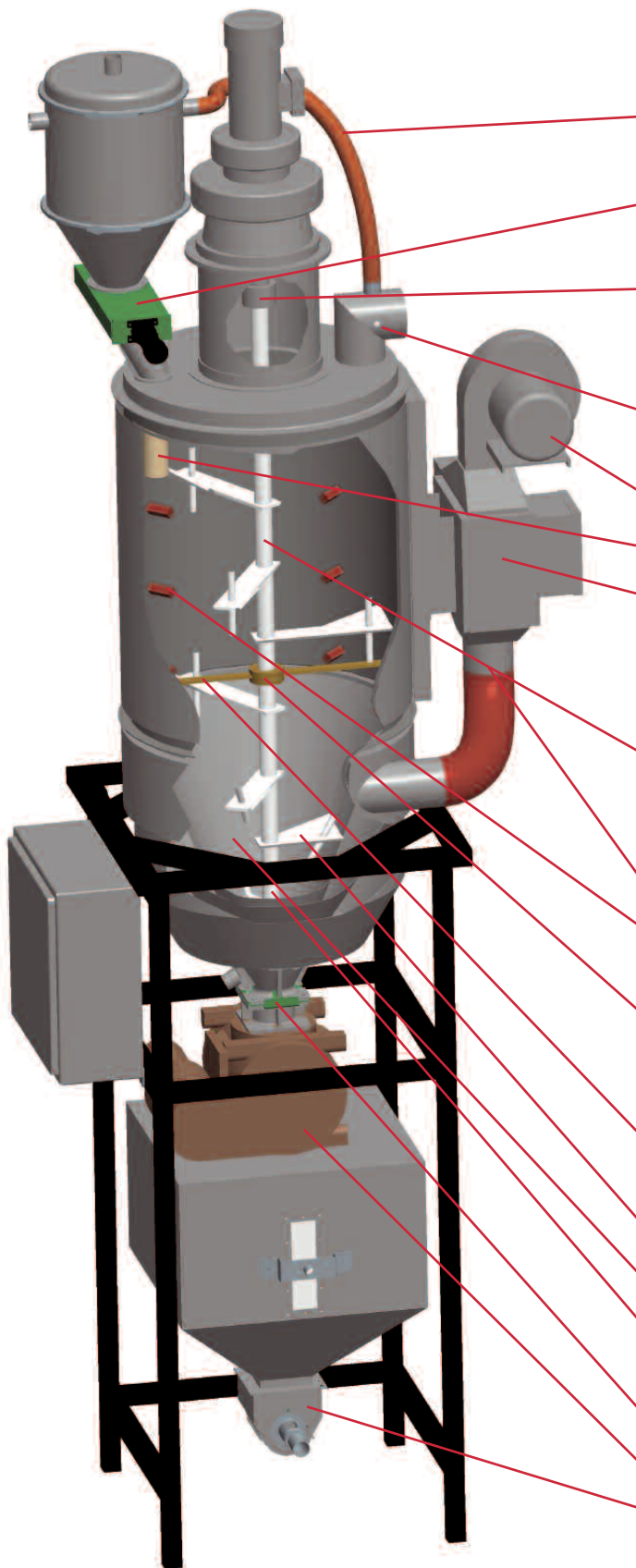
NOVATEC CCR systems are designed to provide constant temperature hot air at the rate of 1 cfm/lb./hr. (.77 m³/kg/hr.)

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



Look closely at a NOVATEC CCR System

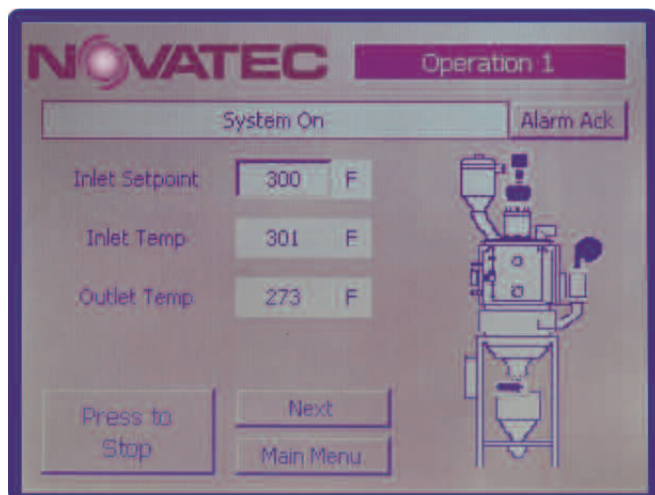
...to see the standard features that make your crystallization process run efficiently with uncomplicated reliability!



- Air purge for vacuum chamber assists discharge of hard-to-flow materials
- Slide gate with positive shut-off prevents agglomeration in vacuum chamber
- 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 date stamp record of operator acknowledgement
- Alarm re-sets upon correction of condition
- Real-time clock
- Seven-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

Standard Crystallizer Specifications*

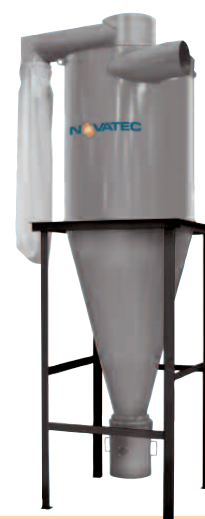
† Part Number	**Throughput Capacity		Overall Height		Overall Width		Overall Depth	
	lb./hr.	kg/hr.	in.	m	in.	m	in.	m
CCR-100S-46	100	45	130	3.3	42	1.17	50	1.25
CCR-250S-46	250	114	194	4.9	42	1.17	50	1.25
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CCR-750S-46	750	340	209	5.3	42	1.17	50	1.25
CCR-1000S-46	1000	454	209	5.3	52	1.32	60	1.53
CCR-1500S-46	1500	680	221	5.6	56	1.42	64	1.63
CCR-2000S-46	2000	909	269	6.8	60	1.52	68	1.73
CCR-3000S-46	3000	1364	262	6.7	64	1.63	72	1.83
CCR-4000S-46	4000	1818	274	7	70	1.78	78	1.98

Standard voltage 460V/3ph/60Hz

† Optional voltage 575V/3ph/60 Hz changes -46 to -57 in part number

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

** Based on 22 lb./ft³ (.62 m³) bulk density.



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

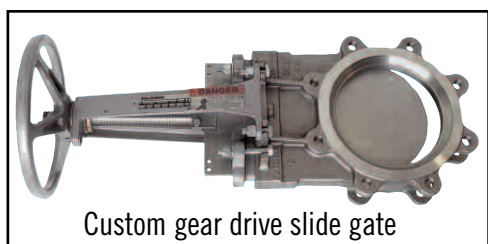
CUSTOM OPTION:

Large capacity filters for very dusty regrind.

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



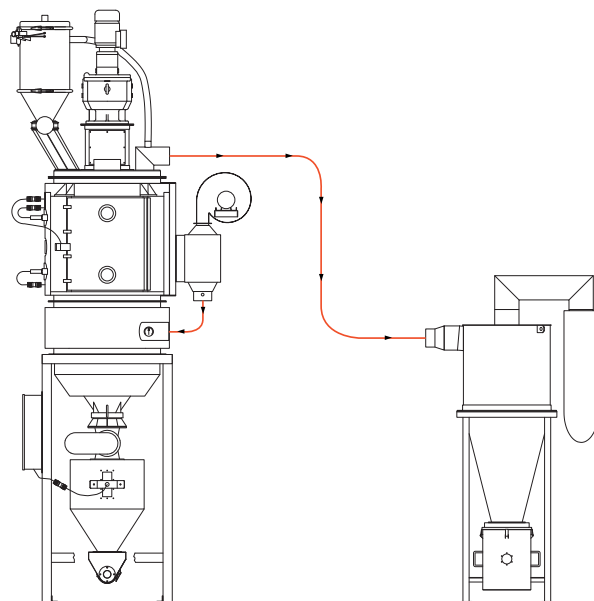
Custom gear drive slide gate

GAS FIRED PROCESS HEATER - Custom Option



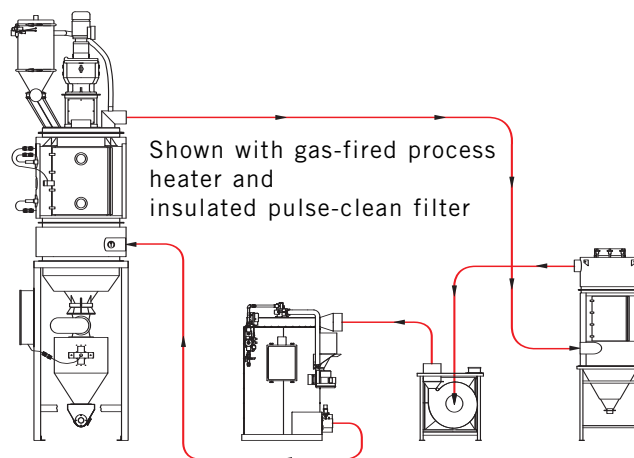
- Up to 90+% thermal efficiency can produce significant energy savings over electric heaters.
- Safe, indirect gas heating isolates process from hot gas.
- Process air temperature adjustable from 160-400°F (71-204° C) .
- Stainless steel combustion chamber (patent# 6044837)
- NFPA-86 gas train standard or optional IRI
- UL/C-UL listed flame control panel with main disconnect switch as standard.
- Other code options available.

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

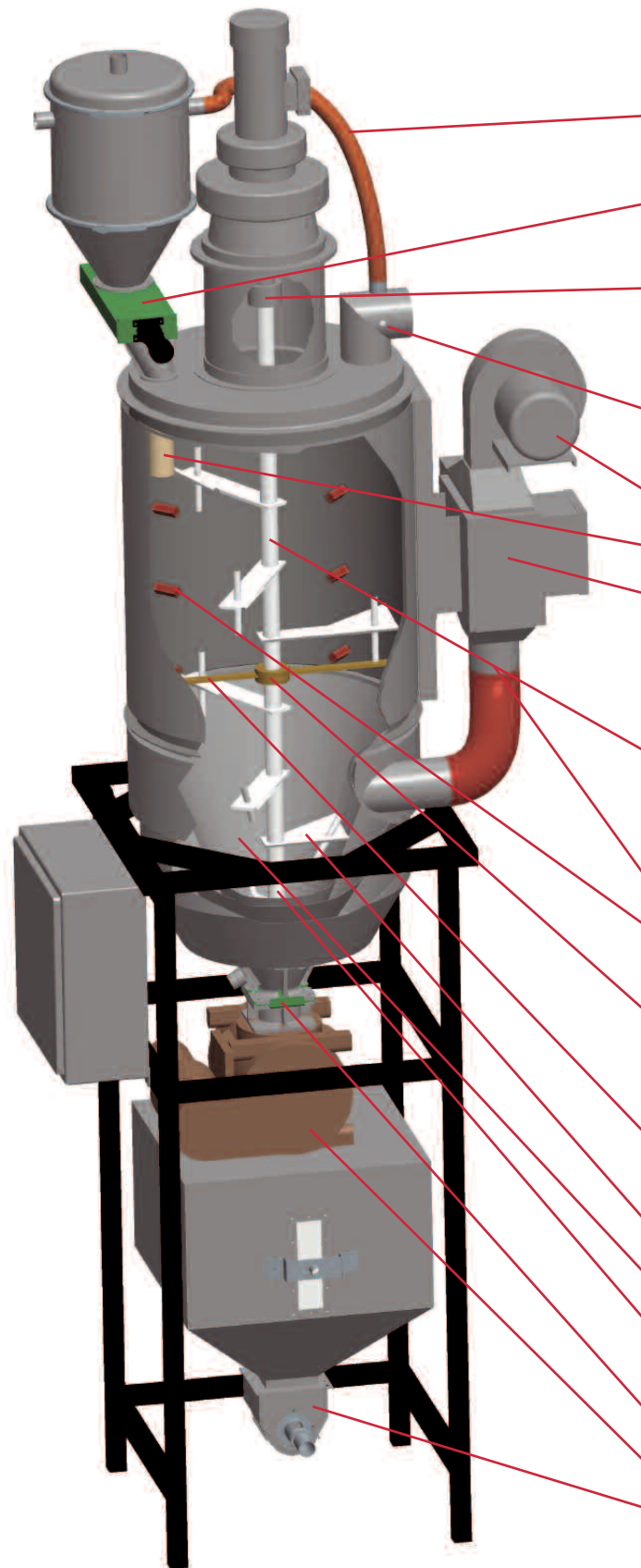


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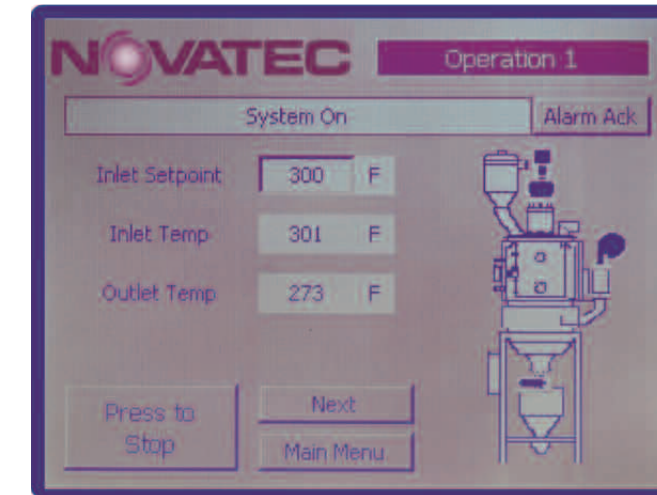
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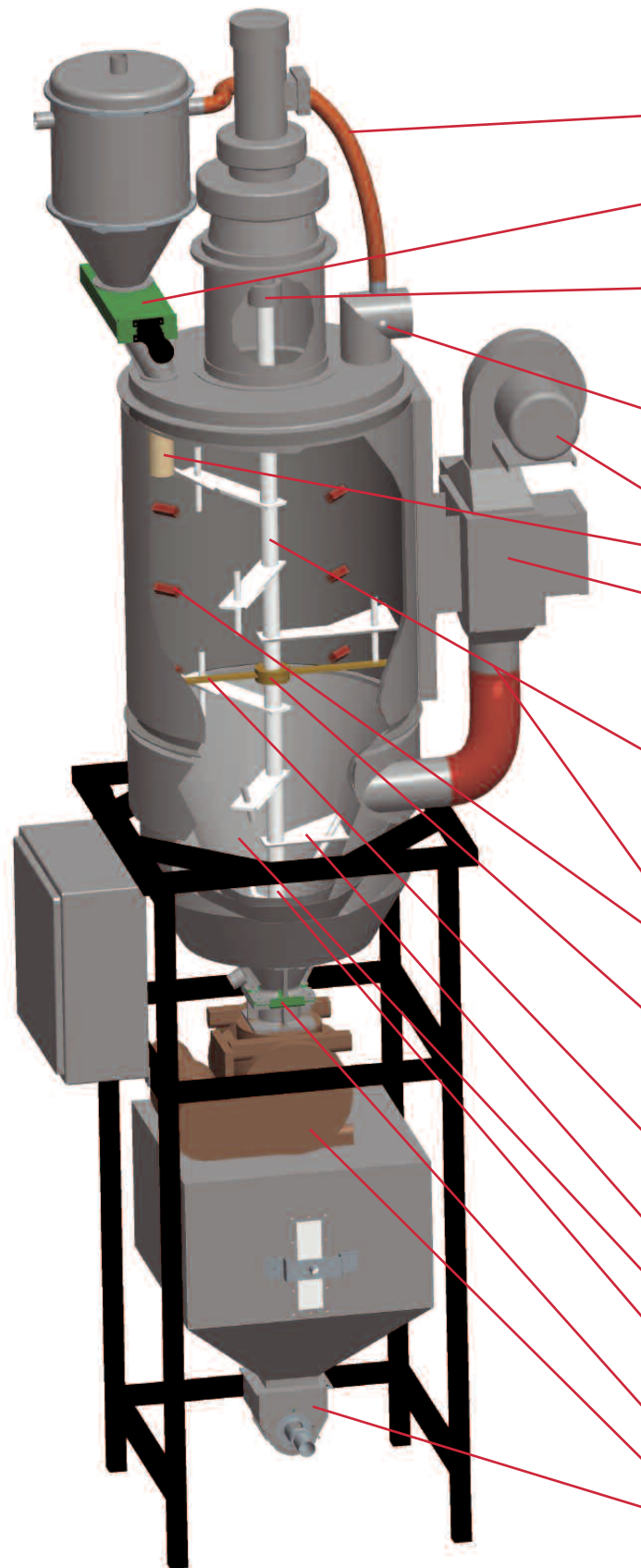
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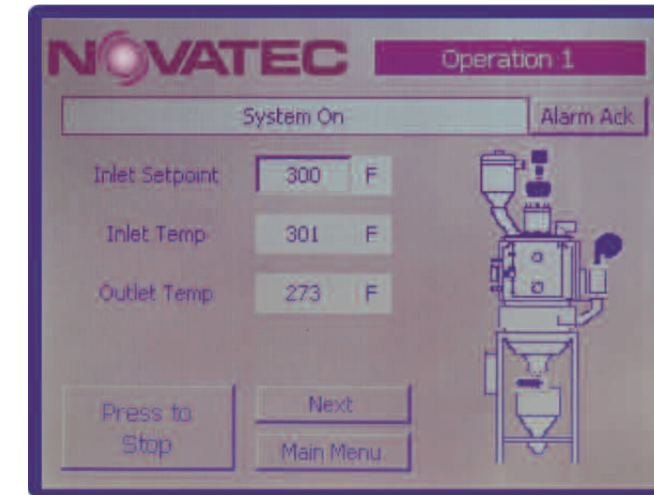
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