

CCR Closed-Loop Crystallizer

Converts amorphous PET pellets and regrind to a re-crystallized state for drying.

Comet's CCR closed-loop crystallizers are used to re-crystallize PET amorphous material before drying to prevent clumps from occurring. Once re-crystallized, the PET material can be conveyed to a material storage bin or directly into a drying hopper.

The system consists mainly of heating elements, an insulated hopper, and an agitator screw mixing device. After uncrystallized PET material is fed into the hopper, the system begins re-crystallization. The agitator screw slowly blends the material to prevent clumping.

Standard Features

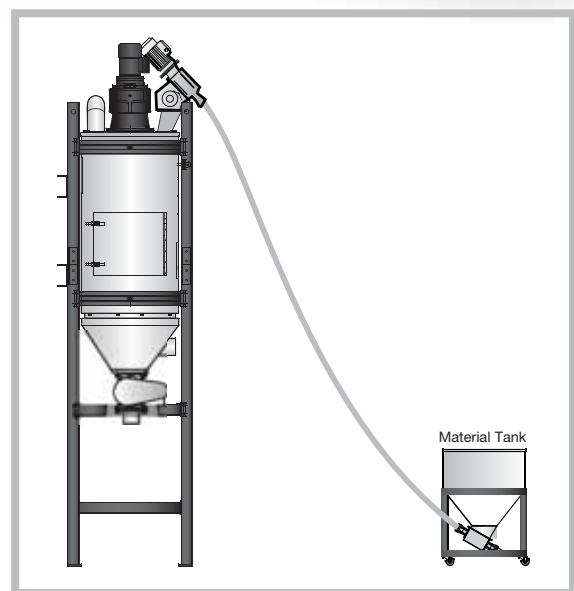
- Constant, fixed speed of agitator keeps PET material moving to prevent clumping as it is heated during the crystallization process.
- Simplifies and improves drying efficiency (even under high temperatures).
- Cyclone dust collector for dusty resin. Filter bag changing is reduced, extending the lifespan of the bag.
- Double overheat protector reduces the possibility of either mechanical or man-made heating problems.
- Tightly sealed rotary valve enables accurate, crystallized material output.
- Material level switch accurately detects the material level making operation more reliable.
- Negative pressure tester immediately tests filter ventilation and also cleans the filter to avoid blockage. An alarm sounds when the negative pressure is higher than the set value.

Accessory Options

- Auto loader, hopper receiver, magnetic base, and suction box for material conveying.
- Feed screw for stable, even conveying of uncrystallized material.
- External stainless steel pipeline.



CCR-450U



Optional Feed Screw

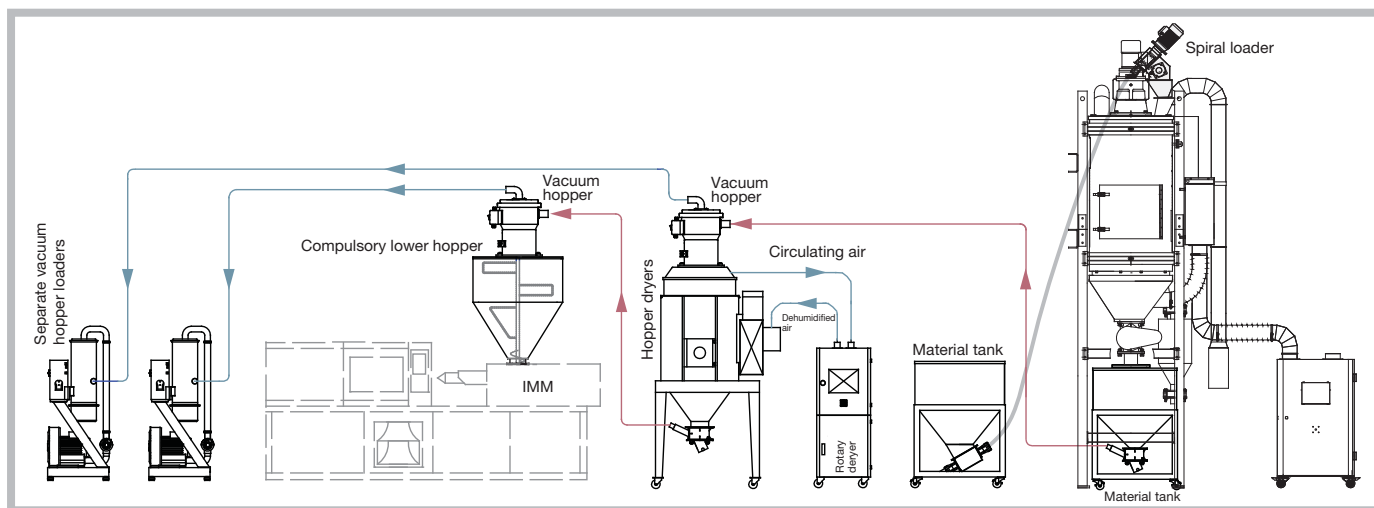
CCR Series

Working Principle

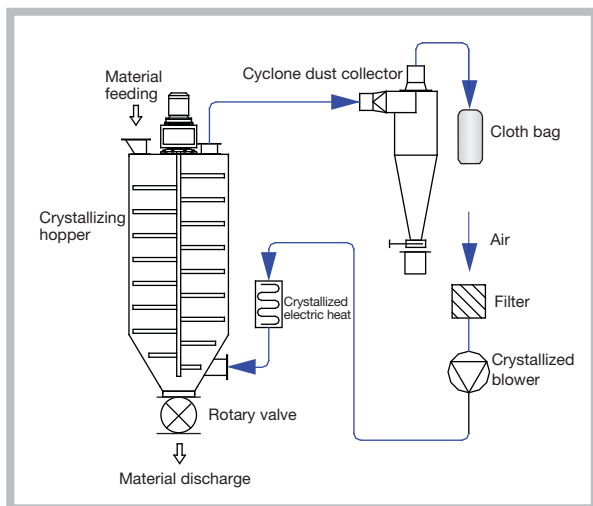
The CCR monitors both the level and temperature of the resin in the top of the hopper and automatically regulates the speed the material moves through the hopper so every pellet is crystallized before discharge.

Once material filling begins, the CCR automatically begins agitating and heating the material. The agitator screw slowly blends the material to prevent clumping and material degradation during the heating process. A temperature sensing probe detects when the crystallized temperature value has been reached.

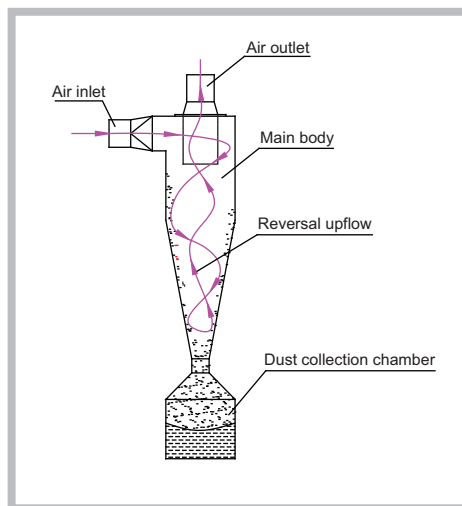
As the material level in the hopper gradually decreases, a filling device begins supplying uncrystallized PET material. When the temperature sensing probe detects that the correct temperature value has been reached, it stops conveying material. If the temperature rises again to reach the set crystallized temperature, the feeding device will activate so the continuous crystallization hopper process can be repeated in a closed-loop.



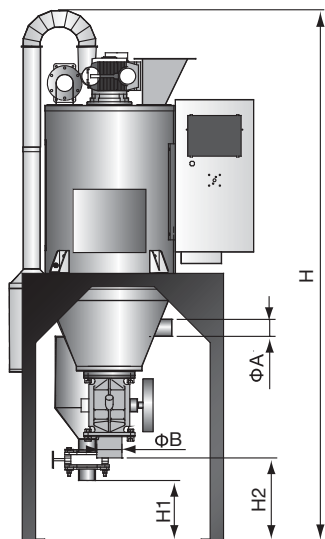
CCR Applications



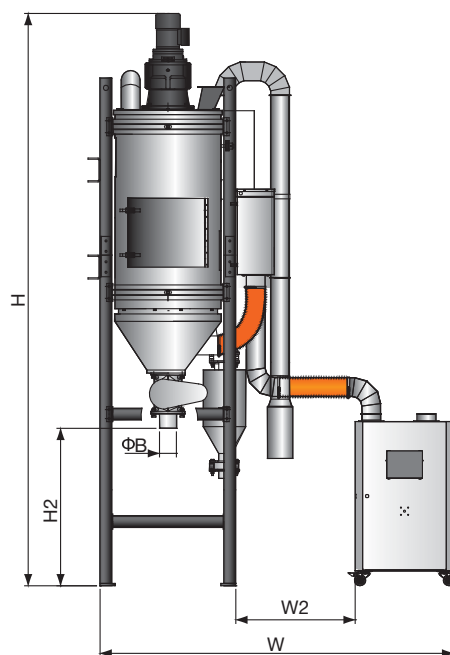
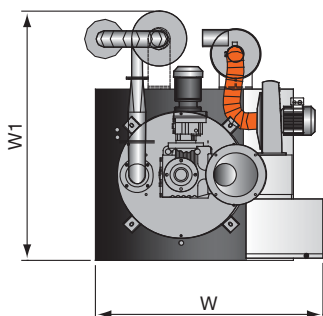
Working Principle



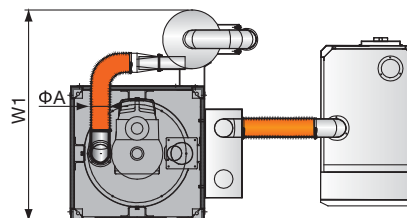
Cyclone Dust Collector Working Principle



CCR-160U



CCR-450U and above



Specifications

Model	CCR-160U	CCR-450U	CCR-900U	CCR-1600U	CCR-2500U
Heater Power (kW)	12	24	48	96	128
Blower Power (kW)	0.55 / 0.63	2.2 / 2.6	3 / 3.6	7.5 / 8.6	15 / 17.2
Blending Motor Power (kW)	0.25 / 0.28	0.55 / 0.66	1.5 / 1.8	1.5 / 1.8	4 / 4.8
Max. Throughput (kg/hr)	50	150	300	500	750
Hopper Capacity (kg)	160	450	900	1600	2500
Dimensions					
H (mm)	2380	3850	4450	5350	5600
H1 (mm)	280	720	1040	860	1270
H2 (mm)	380	1060	1185	1260	1270
W (mm)	1040	2370	2890	3570	4050
W1 (mm)	1140	1440	1930	2190	2350
W2 (mm)	—	800	800	800	800
ØA (inch)	3	5	6	8	8
ØB (inch)	4	4	5	5	5
Weight (kg)	235	500	865	2290	2790

Note: 1. Above maximum processing capacity is based on uncrystallized PET material of 0.85kg/L in density and 3-5mm in diameter.
2. Power: 3ØP, 230 / 400 / 460 / 575VAC, 50 / 60Hz.

We reserve the right to change specifications without prior notice.

PET Facts

PET plastic does not contain BPA. Most single-serve plastic bottles, including those for water, soft drinks and juices, industrial yarns, industry thread, heat-resistant dishware, etc. are made with PET. This material is globally recognized as a safe, recyclable packaging material. Numerous tests have created a broad scientific consensus that PET is non-toxic and is a safe material for the storage of food and beverages. Facts on PET supports the efforts of regulators to ensure that plastics are safe for the public through scientific testing and analysis.

