



CPM Crown's Dryer-Cooler



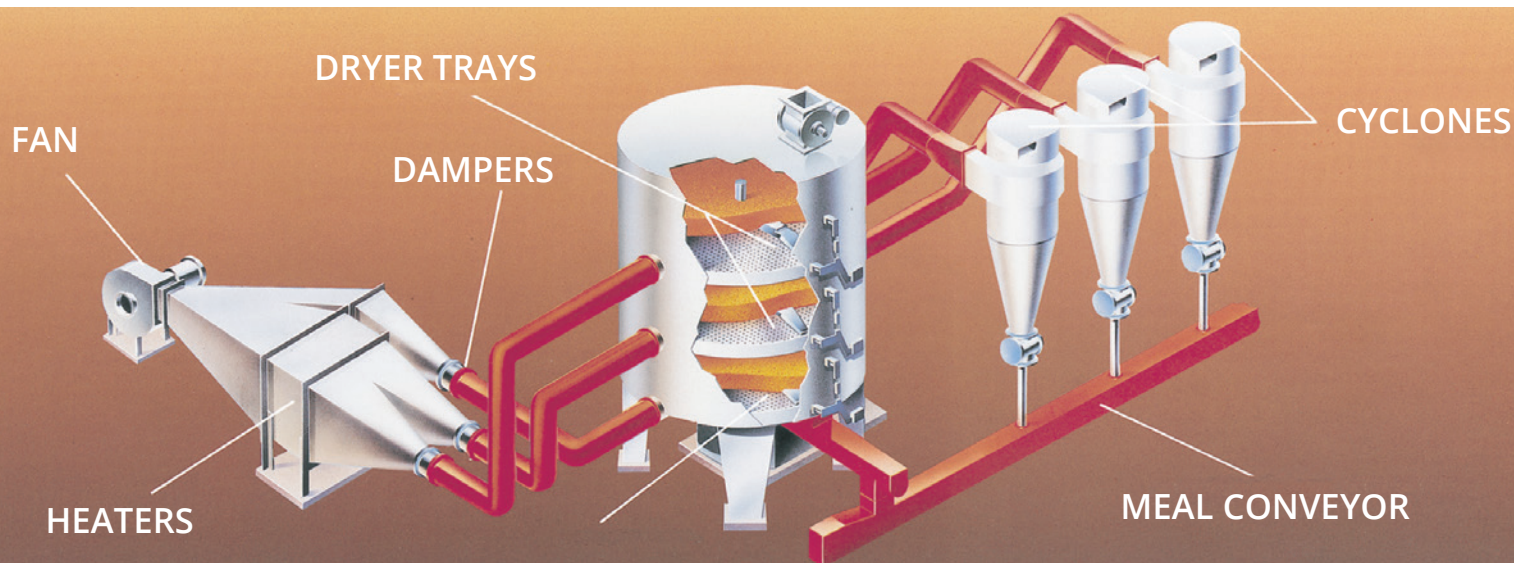
DESIGNED TO MEET YOUR PRODUCTION REQUIREMENTS



The CPM Crown Design

Crown obtained the license for the Crown/Schumacher Desolventizer-Toaster-Dryer-Cooler (DTDC) in 1976. Recognizing that not every oil mill required a complete DTDC, Crown developed and designed a separate unit known as the Crown Dryer-Cooler (DC). This refinement of the DTDC has been extremely popular in vegetable oilseed plants over the years.

CPM Crown Dryer-Cooler Operation



- Over 95 Crown DCs have been installed by Crown throughout the world.
- Crown DCs are available for capacities up to 10,000 metric tons per day.
- Crown DCs operate on soybeans, canola, rapeseed, sunflower, peanuts, corn germ, woodchips, cottonseed, palm kernel and a wide variety of other products.

Features and Advantages

- The evenly distributed flow of hot air and cool air in a true counter-current system results in high efficiency and reduced energy costs.
- Initial investment reduced as compared to a rotary steam tube dryer and cooler.
- One-piece steel shell to prevent leakage.
- Hard surfaced steel sweep arms for longer wear.
- Automatic gate mechanisms are adjustable for loading each tray with the desired depth of meal.
- Heavy duty gate bearings and seals for long wear and minimum leakage.
- Quick opening round manholes for easy access and tight closure.
- Evaporative cooling utilized to obtain a steam efficiency above 1.5 Kg of water evaporated for every Kg of steam consumed.

In the solvent extraction of oilseed flakes, the spent, or freshly extracted, flakes come from the extractor with approximately 30 percent solvent (hexane) content. The typical Desolventizer-Toaster (DT) will remove this solvent by live steam evaporation and cook the meal. The Crown DC, when used with a DT, will further dry and cool the meal to produce a meal with the desired characteristics for sale and storage.

The DC consists of a vertical series of trays arranged so the meal can flow successively from the top tray to the lower trays. The material is agitated by rotating sweep arms that extend from a common central shaft. The DC utilizes gate and sail mechanisms to convey the meal from one tray to the next.

Each tray is provided with a round, quick-opening access manhole. The round, center loaded design ensures uniform contact pressure on the rubber sealing gasket. Long-life graphite-bronze radial bearings are provided on each of the trays to hold the main shaft in alignment. A special flex coupling eliminates gearbox misalignment problems.

The drying and cooling is accomplished the same way as in our DTDC by injecting heated air in the drying section and using ambient temperature air to cool the meal in the cooling section. The evenly distributed flow of hot air and cool air in a true countercurrent system results in extremely high efficiency and reduces energy costs.



The DC has proven to be a very efficient and effective way to dry and cool most any solvent extracted vegetable oil bearing meal. The DC includes the advantages of the DTDC when used with a DT.

For ongoing innovation, Crown's technology and team are second to none.

CPM Crown's Global Innovation Center is a facility unlike any other. A fully functional 15,000 sq. ft. pilot plant, analytical lab and training facility, the GIC offers piloting capabilities from benchtop lab scale to multiple tons per day of continuous production, simulating real life and enabling customers to develop and test new product concepts in a confidential, controlled environment. The GIC has capabilities in preparation, extraction, desolventizing, drying, deodorizing, refining, fat splitting, renewable diesel and specialty extraction (including Hemp CBD Oil). Crown's technical expertise, R&D and full lifecycle process provide guidance and support at every step from feasibility, trials and custom processing to commercial-sized operations and aftermarket.



Feeding, Fueling and Building **a Better World.**



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