

Dryer Discharge



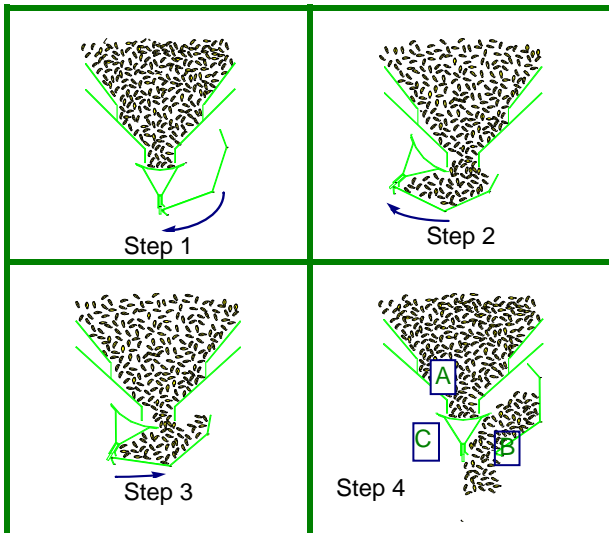
Discharge

The volumetric discharge is an essential part of every Cimbria dryer. The discharge of cereal is done through 3.5 or 8 discharge containers, combined with sector valves. The discharge containers are combined in two groups which are filled and emptied on turn. This secures an even and homogeneous flow of cereal through the dryer.

Design and Function

The design of the discharge is the same for all sorts of cereal. The wide aperture eliminates the risk of clogging. The turns of filling and emptying of the sets of discharge containers connected in two groups provides a good mixing and prevents an eventual bridging of the cereal.

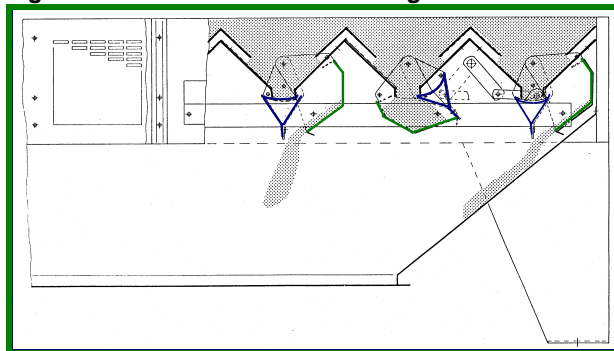
Figure 1: Filling and Emptying of a Discharge Container



A: Aperture, B: Discharge Container, C: Sector Valve.

The aperture is shut completely by the sector valve between each filling and emptying of the discharge container which ensures a precise control of the flow through the dryer.

Figure 2: Sectional View of Discharge in Function



The size of the discharge apertures and -containers is the same for all models of dryers only the number varies as indicated in table 1.

Table 1: Dryer Discharge Section

Dryer Type	No. of Containers	Width [mm]	Length [mm]	Weight [kg]
A	8	3360	1980	710
B	5	2130	1980	510
C	3	1310	1980	365

Discharge Capacity

Every emptying of a discharge container produces approximately 32 litre (approximately 24 kg at 0.75 kg/litre).

Using continual discharge of a dryer type A with out stop the number of strokes will be 24 per minute corresponding to the content of approximately 2 sections and 275 t/h. Matching 172 t/h for a B type and 103 t/h for a C type.

The interval between the strokes is controlled from the control panel. This and the constant volume per stroke enables a precise control of the cereal flow through the dryer.

The filling of a container is determent by the mutual friction and the angle of slipping of the individual type of cereal.

Drive and Motor

Two sided joint pull on all containers and sector valves. All types are equipped with a 0.75 kW gear motor and indication set. The motor is secured against overload through a safety split in the gear.

Material of Construction

The discharge section of the Cimbria dryer is made from heavy steel plate and painted in Green, RAL 6005, lustre 60-70. The sector valves and discharge containers are constructed from stainless steel.