

# Products & Solutions for seed centres



## The BCC Liquid Separator



manufactured from stainless steel



dewatering station



mixing funnel



seed is transferred continuously by the tank overflow stream

## The BCC Liquid Separator

Liquid Separation is used as a continuous process for separation of mechanically damaged seed, seeds with insect damages, resin particles and other particles that resemble the seeds in size and form, but have a dissimilar relative density. A washing effect is also achieved, as dust and wing particles stuck to the seed are removed. Liquid separation is an efficient method for many species and seed lots, although this process is not always required after seed extraction.

The Liquid Separator is commonly used in small to large scale seed processing plants where seed requires a liquid separation process.

### THE PROCESS

The seed is manually fed into the seed hopper, from where the seed is vibrated into the mixing funnel into which water (or another liquid) is added. The seed hopper is available in different configurations, i.e.: a) floor model which is free standing, b) floor model with a small operator's platform and step, c) central platform model.

From the mixing funnel the seed and liquid mixture is injected near the bottom of the liquid tank, thereby eliminating surface tension effects. An increased water pressure at the outlet improves the separation effect. The process is based on differences in buoyancy of good, mature seeds and defective seeds. The good fraction of the seed lot as well as empty seed with complete and undamaged seed coats will float to the surface of the tank. The empty seed needs to be separated in the gravity separation process. When reaching the surface, the seed is transferred continuously by the tank overflow stream to the seed distribution tube and further into a seed collection box.

The principle of the liquid separation can also be



reversed to separate heavy seeds from lighter impurities. In this case the process is batch wise. The good seed is collected at the bottom of the tank, to be drained out in intervals. The seed dryer box is placed in a dewatering station, which allows excessive water to drain off the seed. The drained liquid is collected and returned to the reservoir tank. From the tank an adjustable flow of liquid is pumped back to the mixing funnel. The separation tank has a removable stainless screen insert to enable easy emptying of debris that sinks to the bottom of the tank.

The complete liquid separation equipment is made from stainless steel or other non corrosive material



seed collection box

## OPERATIONAL BENEFITS & KEY FEATURES

- Continuous cleaning (seed lighter than impurities) or batch processing (seed heavier than impurities) is possible in the Liquid Separator.
- Recycling of water through the complete system (from the dewatering station to the liquid separator reservoir) reduces water usage.
- Seed is collected in seed dryer boxes for direct transfer to the Seed Dryer or Surface Dryer.
- Complete unit manufactured from stainless steel.
- Integrated step on the side of the reservoir tank for easy monitoring, lifting of separation tank insert and cleaning.



## ACCESSORIES AND EXTRA FEATURES

Seed hopper is available in different configurations

## TECHNICAL DATA

<b>Dimensions (L x W x H):</b>	<b>3800mm x 2000mm x 2500mm (incl. seed hopper)</b>
<b>Weight:</b>	<b>200kg</b>
<b>Power supply:</b>	<b>3 x 400V, 50Hz</b>
<b>Power requirement:</b>	<b>&lt;0.50 kW</b>
<b>Design capacity:</b>	<b>10 - 50 kg seed/hour</b>
<b>Volume of seed hopper:</b>	<b>100 liters</b>
<b>Total water volume:</b>	<b>200 liters</b>
<b>Water supply:</b>	<b>20-50 liters/minute at 10-30°C (adjustable temperature is preferred)</b>
<b>Construction:</b>	<b>Stainless separation tank and bottom tank with pump and pipes for water circulation.</b>

