Entrainment Separators

- High Efficiency Droplet Removal
- Very Low Pressure Drop
- Easy to Retrofit to Existing Equipment
- Internal or External to the Vessel
- Very Low Maintenance Requirements
- Manufactured from Steel or Stainless Steel
Entrainment separators are widely used in sugar factories for the removal of:

- Entrained product droplets from evaporator and vacuum pan vapour.
- Entrained droplets in condensate flash recovery vessels.
- Wetted particulates from the scrubbed flue gas in boiler scrubbers.

Louvre (chevron) type entrainment separators

The most widely used modern entrainment separators are the louvre or chevron plate types. Bosch Projects’ entrainment separators have the following characteristics:

- High separation efficiencies, even of the smallest droplets (down to three to five microns).
- High vapour capacities.
- Low pressure drops, typically 100 to 250 Pa for normal efficiencies, (capturing > 99% of droplets > 10 microns, higher efficiencies require higher pressure drops).
- Non-clogging and requires minimal cleaning.
- Robust and requires minimal maintenance.
- Water sprays can be used for washing the louvres which can also be easily removed.

Gas flow velocity is critical to the separator’s performance. The velocity should be high enough to ensure inertial compaction, but low enough to cause re-entrainment off the surface. The lower the gas density, the higher the appropriate velocity. Densities of the entrained droplets (low or high brix juice, massecuite) must also be taken into account.

The Bosch Projects entrainment separators may be mounted in one of two configurations:

- As a horizontal pack, through which the gas flows vertically.
- As a vertical pack, through which the gas flows horizontally.

They can therefore be designed for installation either internally (within the vessel) or externally (e.g. in a vapour outlet pipe or flue gas duct).

Construction materials include carbon steel, 3Cr12 and stainless steel.