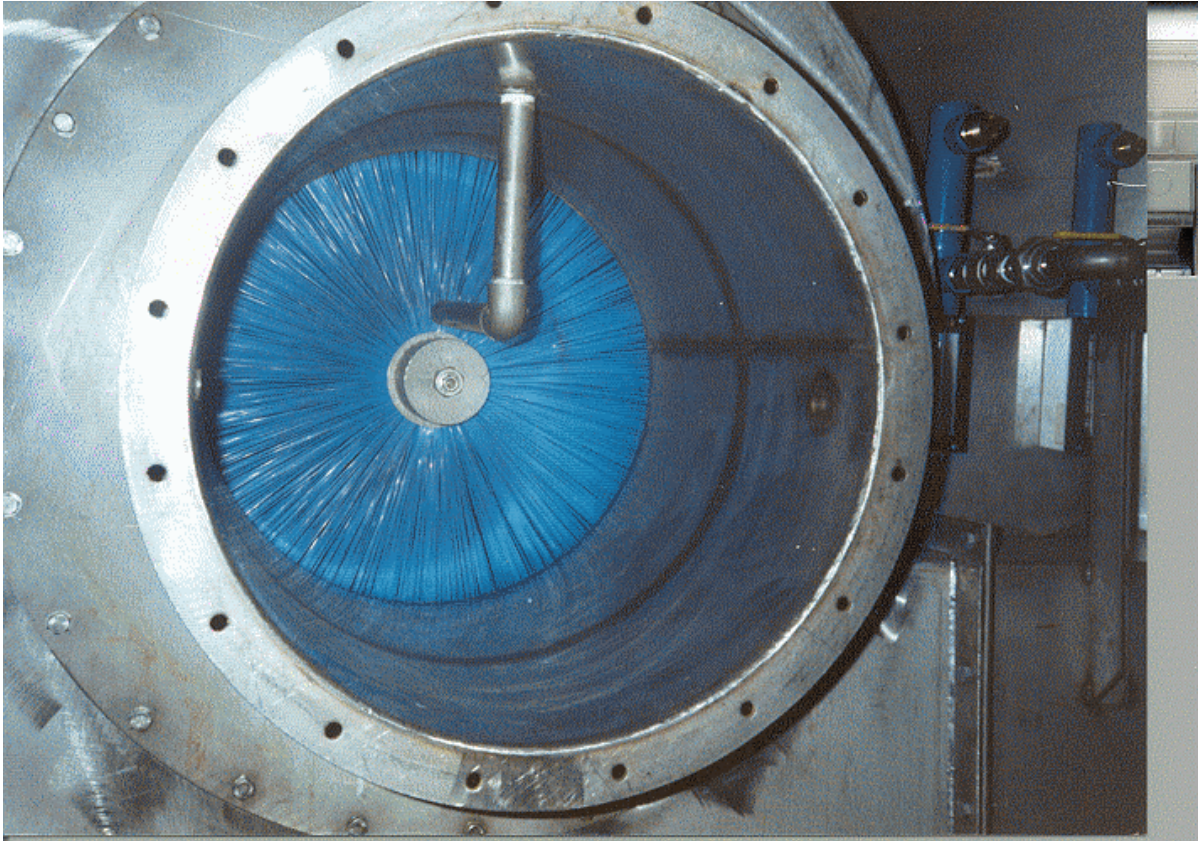


BEGG COUSLAND ENVIROTEC LTD.



Ammonium Nitrate Granulator Dryer Emission Control

The Becoflex system comprises a fan type volute containing a rotating brush, a brush spraying system and this is then connected to a discharge vessel, where the liquid / slurry is collected in the sump and drained or recirculated, while the cleaned air exits through the top section.

The key features of the Becoflex technology are :

- Highly effective gas scrubbing by means of dynamic contact between gas and liquid resulting from the rotating brush fibres
- Solids removal and self-cleaning by the liquid scrubbing action and centrifugal slurry discharge
- Air movement by suction generated by the rotating brush, more than needed for the system resistance, making it free of pressure loss.
- Minimisation of scrubbing liquid volume due to the intensive contact within the fan volute ; liquids can also be recirculated
- Minimisation of the scrubber size and footprint
- Minimum maintenance requirement

Becoflex Rotary Brush Scrubber Case Study
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Pilot units tests were done in Europe on the exit air flow of an Ammonium Nitrate Granulator Dryer to achieve emissions of less than 10mg/Nm³.

The results were less than 10mg/Nm³ and a first order was placed for a full scale installation handling up to 65,000 Nm³/hr.

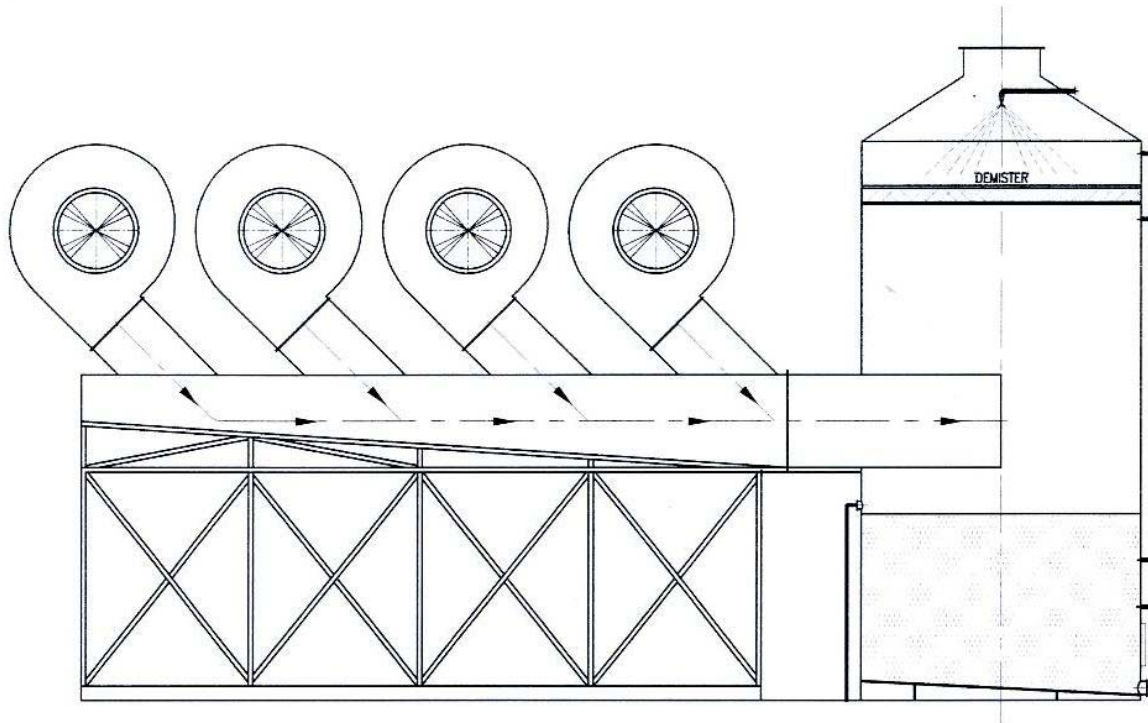
Design :

Combined Total Air Flow : 64,000 m³/Hr (maximum) using :

A flow of 17,000 to 25,000 m³/Hr per each of 2 x Becoflex BF130 Rotary Brush units

A flow of 7,000 to 15,000 m³/Hr per each of 2 x Becoflex BF114 Rotary Brush units

All 4 Becoflex Brush sections discharge into the same collector duct leading to a single, common Becoflex discharge vessel 3000mm i/dia x 7000mm long



All materials 304L Stainless Steel
Becoflex brush fibres in Polypropylene

Duty and Performance :

Operating temperature :	52 °C
Inlet dust load :	15,000 to 20,000mg/Nm ³ Ammonium Nitrate prills
Inlet Ammonia load :	< 50mg/Nm ³
Scrubbing solution acidity :	25%- 50% Ammonium Nitrate solution + Nitric Acid
Spray Per Brush Scrubber	Max. 160 litres / min at 1 bar
Efficiency guarantees met:	Max. 10mg/Nm ³ Ammonium Nitrate particles Max. 5mg/Nm ³ Ammonia

Becoflex Rotary Brush Scrubber Case Study
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**A Becoflex BF 130
ready for shipment.**

**The 2 x Becoflex BF 114
Installed above the A.N.
Granulator Dryer**



**The Becoflex Discharge
Vessel with single
tangential inlet duct**