100 YEARS 1920-2020 Riedel FILTERTECHNIK

RUPP FOOD

Odour Control for Cooler & Dryer Exhaust

During Pet Food Cooling & Drying Processes odours occur to a large and intense extent that have to be treated in a customer specific manner.

Requirements

Our customer, a global player, specialized in the production of dry food for cats and dogs, operates five production lines at its factory in Hörbranz, Austria. Especially in the drying processes of pet food production a high and intense odour load occurs. The odour emissions leaving the factory can be perceived from a great distance. Due to complaints from the surrounding neighborhood, requirements have been imposed by the local authorities.

As a specialist in exhaust air purification, Riedel was selected to implement a system reducing these odour emissions. Three production lines with a total airflow of 48,000 m^3/h were chosen by the customer with the goal to reduce the odour concentration from 5,000 below 500 OU/m^3. Additionally to the limited space for installation, our challenge was to prevent the occurrence of the typical raw gas smell. Further, the design complexity of the systems was increased due to fluctuating process conditions caused by different recipes and odour compositions.

Challenges

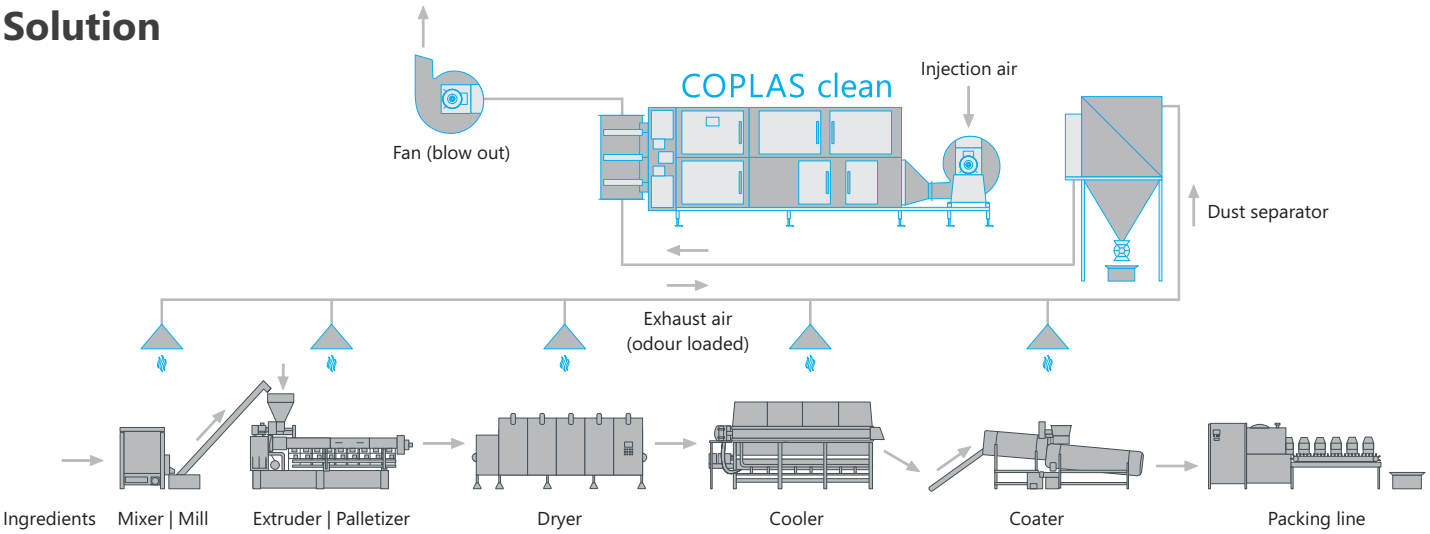
- reducing odours below 500 OU/m^3
- designing systems for fluctuating process conditions
- preventing the occurrence of the typical raw gas smell
- adapting to a very limited space

Based on these requirements and challenges Riedel was supposed to develop a customized, high performing solution that is adjustable and space-saving.

Approach

After defining the project content, the customizing with our **COPLAS clean mobile unit** took place at the customer's site. 100 m^3/h of the exhaust air are treated with different power settings, in order to confirm the applicability and efficiency of the cold plasma technology and to determine the required energy consumption of a potential full-scale system. Therefore, samples were taken before and after the cold plasma treatment by a certified and independent odour laboratory. These were analyzed and evaluated by a trained team of panelists on site.

Solution



COPLAS clean

Based on the results of the customizing, three single systems were designed and installed at Rupp. Due to the compact and modular design as well as the injection principle of our COPLAS clean system, the customer's existing infrastructure could remain in place. Acceptance measurements confirmed that Rupp now fulfills the official requirements. Additionally, a cleanable bag filter is currently being installed and, as they are very satisfied with our technology, another COPLAS clean system has been purchased.

Benefits

- **high odour reduction** to fulfill official requirements
- **maintenance-friendly design** to ease and reduce maintenance efforts
- **control system** to adjust performance in 1% steps according to specific needs
- **modular and compact** for an easy and space-saving solution
- **integrated fan** to avoid pressure losses and to ensure performance
- **cold plasma technology** without use of water or chemicals and generation of waste

»COPLAS eliminates odours like nature -only faster.«
Lars Kükenshöner

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