

PROCESS

HEPA filter emission monitoring for pharmaceutical powder processing

APPLICATION

In the pharmaceutical industry, finished powders are often transferred from the mixing area to tableting machines via vacuum transfer systems. Transfer lines incorporate a high efficiency HEPA filter after the vacuum pump to prevent exposure to potentially harmful dust in the workplace.

HEPA filters can become less effective due to operational wear and tear or through possible mishandling during maintenance work. An effective solution to remotely monitor the HEPA filter performance can enable proactive filter maintenance thereby helping to reduce dust emissions, exposure to pharmaceutical dust in the workplace and wastage.

PROCESS DATA

Material:	Powder
Dust Loadings:	Less than 0.5 mg/m ³
Installation:	LEAK ALERT 65-02 post vacuum pump
Filter Type:	HEPA (High efficiency particulate air)



SOLUTION

An ENVEA LEAK ALERT 65-02 was installed post HEPA filter in the vacuum phase conveying system. *ElectroDynamic*[™] technology used in this instrument successfully monitors sub micron particulate at dust levels lower than 1 mg/m³ with its robust construction being unaffected by product build-up on the sensor rod and no additional services such as air purge required.

The ENVEA Controller, with its graphical display located close to the sensor, allows the local display of relative HEPA performance whilst providing the remote observation of dust emissions in real-time via a 4-20mA signal and the ENVEA DUST TOOLS software.

The initial installation provided significant cost savings in terms of reduced product loss which resulted in the installation of further ENVEA LEAK ALERT 65-02 monitors in other transfer lines. Additional *ElectroDynamic*[™] sensors were installed on bag filters in the tableting area to alert Production and Maintenance Departments of further leakages and product wastage before the final tablet manufacturing process.

CUSTOMER BENEFITS

- Local and remote real time observation of HEPA performance
- Early identification of filter damage
- Enables proactive maintenance regimes
- Optimised production
- Reduction in wastage costs
- Assists prevention of overexposure to dust in the workplace

Monitoring for Powder, Dust & Gas