## **iSMF** Integrated Safety Monitoring Filter



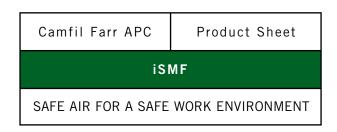


Riga-Flo<sup>®</sup> filter being installed in iSMF.



## Standard Features & Benefits —

- Conveniently installed from the factory on top of the standard Gold Series<sup>®</sup> dust collector.
- Allows access to the HEPA or Riga-Flo<sup>®</sup> filters via the same platform used to access the primary filters.
- Reduces installation costs as there is no additional remote mounted system to be installed that typically requires additional consideration to access the filters when they are required to be changed.
- Allows the total footprint of the dust collection system to be reduced, thus saving valuable manufacturing floor space.
- Each module incorporates two Camfil Farr filters. These filters are easily clamped into position using the same style locking mechanism as those used on the primary filters. Filters are included, but not factory installed.
  - The HEPA grade filters have a minimum DOP efficiency of 99.97% on 0.3 micron and are capable of handling 2650 cfm, (4248 cmh), of air per filter.
  - The Riga-Flo filters have a 95% ASHRAE efficiency and are rated for 2650 cfm, (4248 cmh), per filter.
- Incorporates a Magnahelic gauge for easy monitoring of differential pressures across the final filters.
- Allows the filters to be located prior to fan, thus keeping them under negative pressure.
- Camfil Farr APC also allows this option to be used as a flame arrestor for combustible dust when recirculating the air back into the work space in most cases. (See next page for details.)



## Safety & Protection

The Integrated HEPA Safety Monitoring Filter is mounted on top of the Gold Series<sup>®</sup>.



out of the exhaust pipe. The inlet pipe is protected by a backdraft damper.

The iSMF, incorporating HEPA or Riga-Flow filters, has been proven to isolate the downstream equipment from the progression of a flame front during an explosion. The Gold Series dust collector with an integrated Safety Monitoring Filter allows you to recirculate exhaust air back into the work space when your dust is explosive. In some cases additional pressure wave protection could be required.

The key advantage of this device is that it prevents the transmission of explosive dust (fuel) from the collector. Remote mounted secondary filters cannot do this and are typically not designed to withstand the pressures associated with an explosion. Ducting design and location of remote mounted filters also injects excessive variables that have to be considered by a hazard analysis.

The iSMF sets up a redundant system that not only arrests the flame front but monitors the condition of the primary filters. With this feedback the operator knows when a primary filter starts leaking and can fix the leak before it becomes a safety issue. Also, the iSMF protects the facility from the hazard of any dust

## Used as a flame arrestor for combustible dust

passing through a damaged primary filter.

Camfil Farr claims that this system prevents the progression of the flame front as required in NFPA Performance-based provisions and the NFPA 654 and 101 Life Safety Objectives related to a dust collector deflagration and explosion. This represents one solution of several life safety objectives of which all should be met. The authority having jurisdiction (AHJ) is responsible for reviewing the hazard analysis performed for this installation and determining if the integral SMF is suitable for this application.

Camfil Farr APC offers a technical report, titled Integrated Safety Monitoring Filter (iSMF) Qualified as a Flame Front Arrestor, which describes the passive isolation allowed as prescribed in Chapter 12 of NFPA 69. It also details the test procedure and results of subjecting the Gold Series with iSMF to multiple, controlled and measured internal explosions. This technical report is available upon request.

