



Nuclear

Camfil Farr	Segment brochure	
Nuclear industry and nuclear laboratories		
Camfil Farr - clean air solutions		

Nuclear business



The nuclear business is a major user of High-efficiency filters, and the requirements of this industry have been a major influence of the development of the filters. In this industry high-efficiency filters are used to prevent the release of airborne radioactive particles that might be produced from operations such as chemical separation, extraction or fixation, and mechanical operations that are normally carried out in rooms with filtered exhaust systems.

Filter exhaust systems are also used for containment in the case of potential accidental releases. Generally, in these facilities local filtration is used in the vicinity of the source of airborne materials. The ducts from the local filtration sites are exhausted into a ventilation system that may have several stages of high efficiency filters before release to the atmosphere.

Clean air solutions

Camfil Farr is focused on research and development, state-of-the-art manufacturing, and marketing of air filtration products and services on a global basis. The Camfil Farr group of companies is the world's largest designer and manufacturer of air filters with 24 manufacturing facilities around the globe.

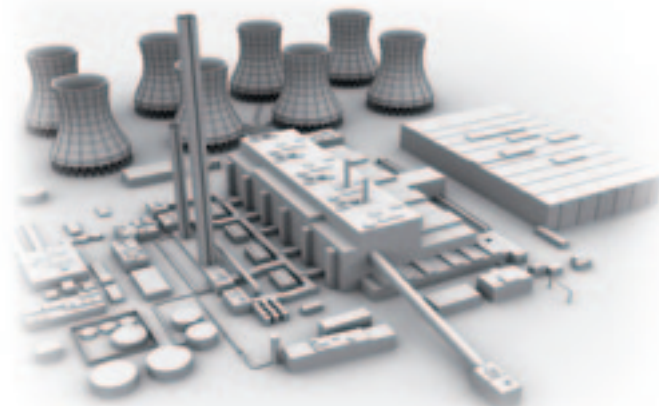
We grew with the nuclear industry

Camfil Farr started to manufacture combined gas and particle filters for the nuclear industry in the early sixties. In recent years, Camfil Farr has continued to increase its effort in the field of nuclear filtration. Acquisition of other companies has brought extensive experience in specialised areas. Large investments have been made in R&D and uniquely, we have built our own full-scale test rig for molecular filtration. Our efforts are driven by the need to offer our clients an extensive range of products and services, catering to many diverse requirements, whether based on technical or commercial criteria.

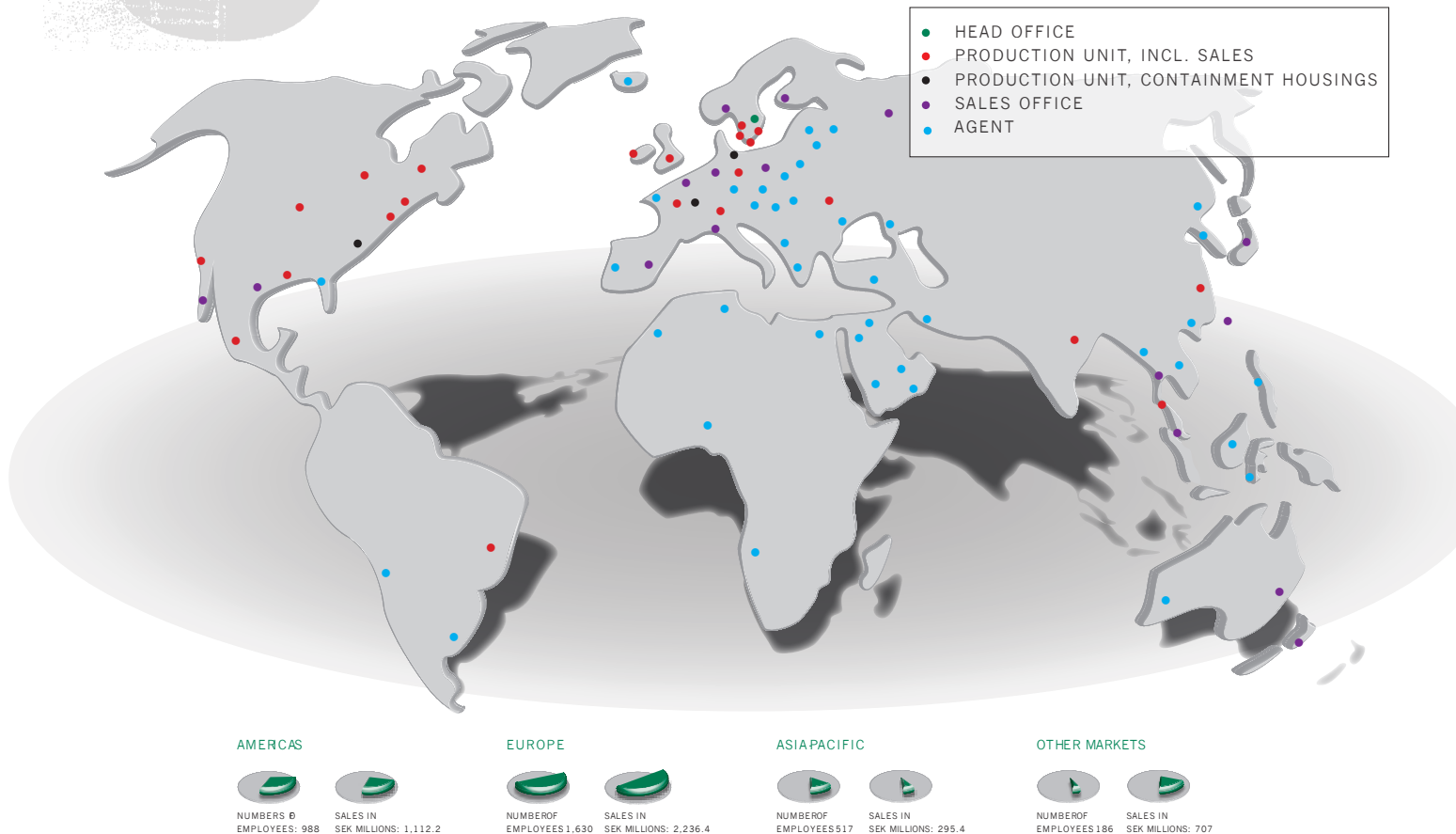
Close to all nuclear applications

As the global leader in air filtration, Camfil Farr offers our customers the security of a long-term partnership. This is backed by documented capability to analyze site-specific needs and supply total air filtration solutions. Our product range can meet your every need – from standard ventilation filters to highly specialised filters for nuclear applications.

Camfil Farr takes great pride in the fact that our products are of the highest quality, offering our customers air filters with the longest life, and lowest operating and maintenance costs.



Short facts on Camfil Farr



Benefits for you

- 50 years in the nuclear industry
- Full range of air filter products – you only need one supplier
- HEPA filter with special nuclear approved test
- Own development of particle and radioactive measurement applications
- Camfil Farr's production facilities are strategically located near NPPs
- CF has equipped 92 NPPs around the world
- Our welders are certified per applicable codes
- All nuclear equipment is fabricated per applicable nuclear codes and QA

Company resources

- 3 300 employees world wide
- 24 production plants
- Sales companies in 25 countries
- Agents in over 50 countries

Production facilities

The solution to contaminants

Camfil Farr specializes in air cleaning systems that handle toxic, hazardous, and radioactive gas streams. We provide HEPA filtration systems that remove contaminants so that discharge can be safely used or blended into the atmosphere. Bag In/Bag Out systems are also available. All Camfil Farr products meet the applicable government and industry codes and qualifications.



**Camfil Farr production plant
Saint-Martin Longueau, France**



**Camfil Farr production plant
Reinfeld, Germany**



**Camfil Farr production plant
Washington NC, USA**

Certified and qualified



Camfil Farr's Mr Arnaud Paque receive the document "AREVA certified supplier".



QUALITY ASSURANCE

Know-how and sustainable. Camfil Farr joined the development of nuclear program and now has a recognized expertise in the field of protection and security. Our high efficiency filters and housings are the ultimate barriers in nuclear facilities.

As such, we have a culture of quality acquired long based on manufacturing process and control personnel. Today, the quality is not only related to the preparation but integrates the entire management. The reference ISO 9001 and ISO 14001 has become as a tool for guiding the company to serve the customer and the performance. Listening to customers is reflected in an organization and marketing commercial field which reflects the expectations of different customer segments to build lines adapted products. The technical assistance supports the service trading to meet specific needs.

Continuous improvements

Our Director of Continuous Improvement (appointed by management) the establishment of a quality system in accordance with ISO 9000: 2000. As set by our Directorate, the policy and quality objectives determine our process efficiency and require dynamic progress at all levels. A network of quality directly integrated with different services to manage the quality aspects of monitoring indicators quality assurance and conduct internal audits. Meetings between the monthly quality assurance and the corresponding to guarantee the cohesion of the team.

Documentation quality

Our quality documentation is seen as a working tool promoting the development and versatility. It was developed by business needs to contribute every day to promote the effectiveness of each.

The recordings are proof of effective implementation, day after day. They allow to establish traceability in the context of contractual requirements.

Certified and qualified:

- **ISO 9001** (Quality Management Standard)
- **ISO 14001** (Environmental Management Standard)
- **Sheet Metal EN 287.1** (Qualified Welders for fusion welding)
- We fulfill **EDF's CRT** (Cahier Règle Technique) - Technical Handbook Rules.
- **CTHEN qualification** (Center Technical Homologation Equipment Nuclear).
- Official qualifications by the **CEA** (Center Energy Atomic), SOPEMEA.
- **Areva qualification** (Regel KTA 1401).
- **TUV Nord Certificate** (Certificate no : 07-202-1201 EN 1846/07)

The America Society of Mechanical Engineers (ASME) Codes:

- **ASME AG-1-2009** Code on Nuclear Air and Gas Treatment plus Addenda **AG-1b-2007 & AG-1a-2004**
- **ASME N509-2002** Nuclear Power Plant Air-Cleaning Units and Components
- **ASME N510-2007** Testing of Nuclear Air Treatment Systems
- **ASME NQA-1 2004** Quality Assurance Requirements for Nuclear Facility Applications (Note: Camfil Farr Washington has a qualified and verified NQA-1 Quality Assurance Program)

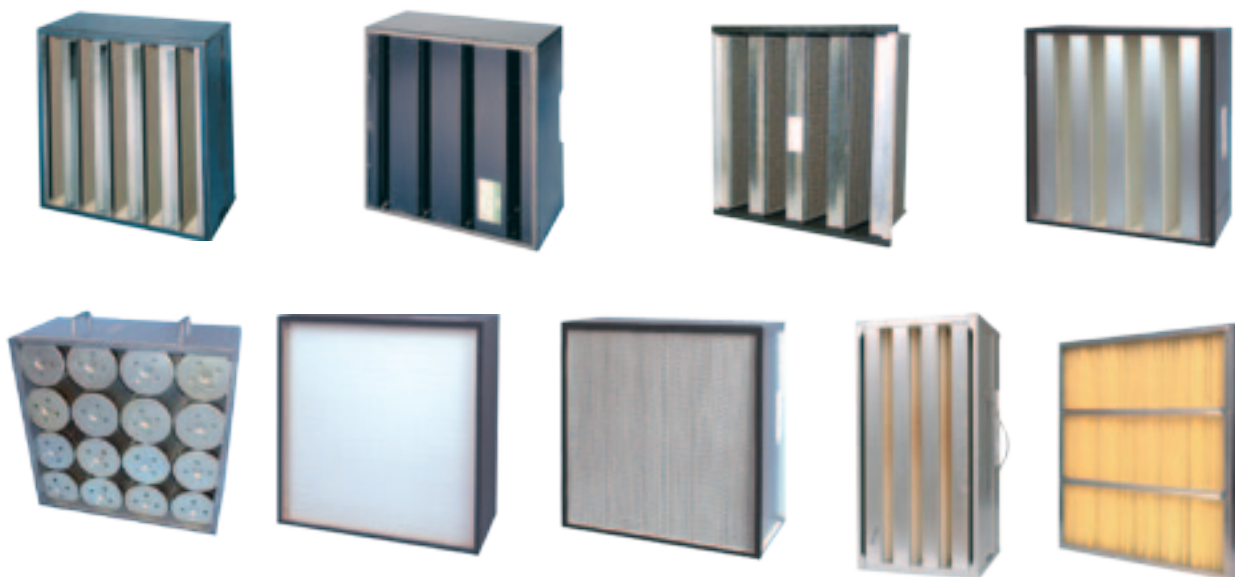
The US Department of Energy (DOE) Nuclear Safety Standards:

- **DOE-HDBK-1132-99** Design Considerations
- **DOE-HDBK-1169-2003** Nuclear Air Cleaning Handbook
- **DOE-STD-1066-99** Fire Protection Design Criteria
- **DOE-STD-3025-2007** Quality Assurance Inspection and Testing of HEPA Filters

Examples of our nuclear application range.

For your specific application, please contact a Camfil Farr representative.

Example of our particle and gas filtration products



Example of our filter housings and dampers



Camfil Farr nuclear reference list - delivery of nuclear filter housings

First delivery started 1953...



NPP	COUNTRY	PRODUCT
France		
Total 58 of 59 powerplants		SO, MUL
2 recycling center, La HAGUE/Marc		SO, MUL
Germany		
Total 16 out of 19 powerplants		FKS,FKKC,MF
Several research Center		
USA		
Aberdeen Proving Grounds		GB, FB, SC
Argonne National Laboratory		GB, FB
Bechtel National		GB, FB, SC
Electric Boat Works		GB, FB, SC
INEEL, Idaho Falls		GB
Los Alamos National Laboratory		GB, FB, SC
Nevada Test Site		GB
Nuclear Fuel Services/Reactor Plant Services		GB, FB, SC
Oak Ridge National Laboratory		GB, FB, SC, HC
Pantex Plant		GB
Rocky Flats Site		GB
Sandia National Laboratory		GB, FB, SC
Savannah River Site		GB, SC
West Valley Demonstration Project Site		GB, HC
Worldwide		
2 NPP	Spain	FKS, FKCC
1 NPP	Indonesia	FKS, FKCC
2 NPP	Switzerland	FKS, FKCC, MF
1 NPP	Argentina	FKS, FKCC
1 NPP	Brasil	MF
1 NPP	Hungary	FKS, MF
1 NPP	Lithuania	MF
1 NPP	Czeck Rep.	FKS, FKCC
2 NPP	Slovakia	FKS, FKCC, MF
4 NPP	Sweden	SO, MUL, MF
2 NPP	South Africa	SO, MUL
2 NPP	South Korea	SO, MUL
2 NPP	China	SO, MUL
1 recycling center Tokai	Japan	SO, MUL

FKS: Particle Filtration Safe Change Housings and Filter
 FKCC: Gas Filtration Deep Bed Filter Housings
 MF: Mobile Filter Units, Particle and/or Gasfiltration
 SO: SOFILTRAD, Gas Filtration Deep Bed Filter Housings
 MUL: MULTIALVÉOLAIRE, Particle Filtration Safe Change Housing
 GB: Gasket Seal Containment Housing & Filter System
 FB: Fluid Seal Containment Housing & Filter System
 SC: Self Contained Containment Housing & Filter System
 HC: Hot Cell Containment Housing & Filter System

On world standards. . .

...Camfil Farr is the global leader in clean air technology and energy efficient air filter solutions with product development, R&D and local representation in the Americas, Europe and Asia-Pacific region.

We supply high quality products and services with the aim of making our customers operations more sustainable, energy efficient and productive.

Our own vision of sustainability is a global approach combining consideration for people, environmental protection and business performance.

Camfil Farr is a member of the United Nations Global Compact programme and follows the GRI sustainability reporting framework.

www.camfilfarr.com

**FOR FURTHER INFORMATION PLEASE CONTACT Y OUR NEAREST CAMFIL FARR OFFICE.
YOU WILL FIND THEM ON OUR WEBSITE.**