

SOTRAS

Leadership in Filtration



Product solution ensuring customer satisfaction



About Sotras...

Sotras was founded as a trading house in 1975 and over the years has transformed itself into an important brand manufacturing industrial filters, producing and distributing its own products in Europe and throughout the world. In particular, Sotras can boast established experience and skill in designing and manufacturing high quality air/oil separators specifically for installation in rotary screw and vane compressors.

Sotras's mission is to provide goods and services of the highest quality to satisfy the market place with specific needs and requirements.

In 2006 a new company, Sotras Logistica, was set up in a modern warehouse of some 4,000 m² near the Turin head office. There, the finished products are stocked and distributed. The premises are strategically located near to Turin Airport and major transport routes.

Fifteen years ago Sotras took its first steps in the China market and since then has successfully acquired important local OEMs as esteemed customers. Many more steps have been taken during these years with excellent results. Thanks to this and in response

to OEMs constant requests, Sotras China has now opened a production site as well as a strategic logistics centre, dedicated to the market in China.

In addition we are also proud of our joint venture in India which is growing on a continuing basis.

Commitment to sustainability...

We believe that respect for health, safety and our surroundings is a fundamental right for everybody and for the environment.

We supply customers all over the world with products and service with a focus on productivity, energy efficiency and safety.

Here are some of the ways we have worked that demonstrate our serious commitment to the **ENVIRONMENT**:

- we embrace industrial growth and innovation bearing in mind our environmental responsibility. We keep a strong focus on the development of sustainable solutions that protect the environment.
- we recycle, reuse and continue to search for new ways to reclaim as much as possible
- SOTRAS is REACH and RoHs certified
- recently we made a huge investment in rebuilding the roof of our manufacturing plant so as to make it free from asbestos. The new roof offers greater insulation thereby giving us greater energy saving and efficiency.

At **SOTRAS** we take **SAFETY** very seriously:

- we have safety education programs in place
- we are planning strong accident avoidance measure and important security improvements have been made in case of fire.
- in SOTRAS we put in action an advanced system of regular cleaning of the air to protect our employees and for the high quality of the products we manufacture

SOTRAS is focused in promoting human rights within the workforce at all its sites and to provide a safe and healthy work environment in a **LEGAL FRAMEWORK**.



Industrial filtration

Today Sotras can supply a top quality range of industrial filters and has specialised in manufacturing filters for

- **COMPRESSORS:** SOTRAS produces original equipment directly for many compressor manufacturers (OEM's) around the world, and as a result the aftermarket products are made with same attention to high standards of components, quality, control, and testing.

- **VACUUM PUMPS:** SOTRAS offers a wide range of filters to suit most requirements in this field and the elements are usually interchangeable with those produced by other leading manufacturers.

All oil separators are manufactured using materials to withstand high pressures and temperatures and to minimize moisture induced deterioration.

In order to achieve the best possible separation efficiency and long working life of the element, it is essential that regular maintenance procedures are followed and joints are applied correctly, as well as the use of good quality air and oil filters.

Today Sotras can also supply a top quality range of complete air filters so as to meet with constant market's request.

- **COMPRESSED AIR APPLICATIONS:** Due to the continuous demand of users of compressed air for clean, high quality air, Sotras offers a range of coalescing filters specifically designed to suit most requirements.

Our established experience enables us to offer simple, efficient and high quality products at competitive prices.

- HYDRAULIC FILTRATION

Thanks to its flexibility Sotras has also been developing an ever-growing range of high quality filters for construction machines and industrial applications.

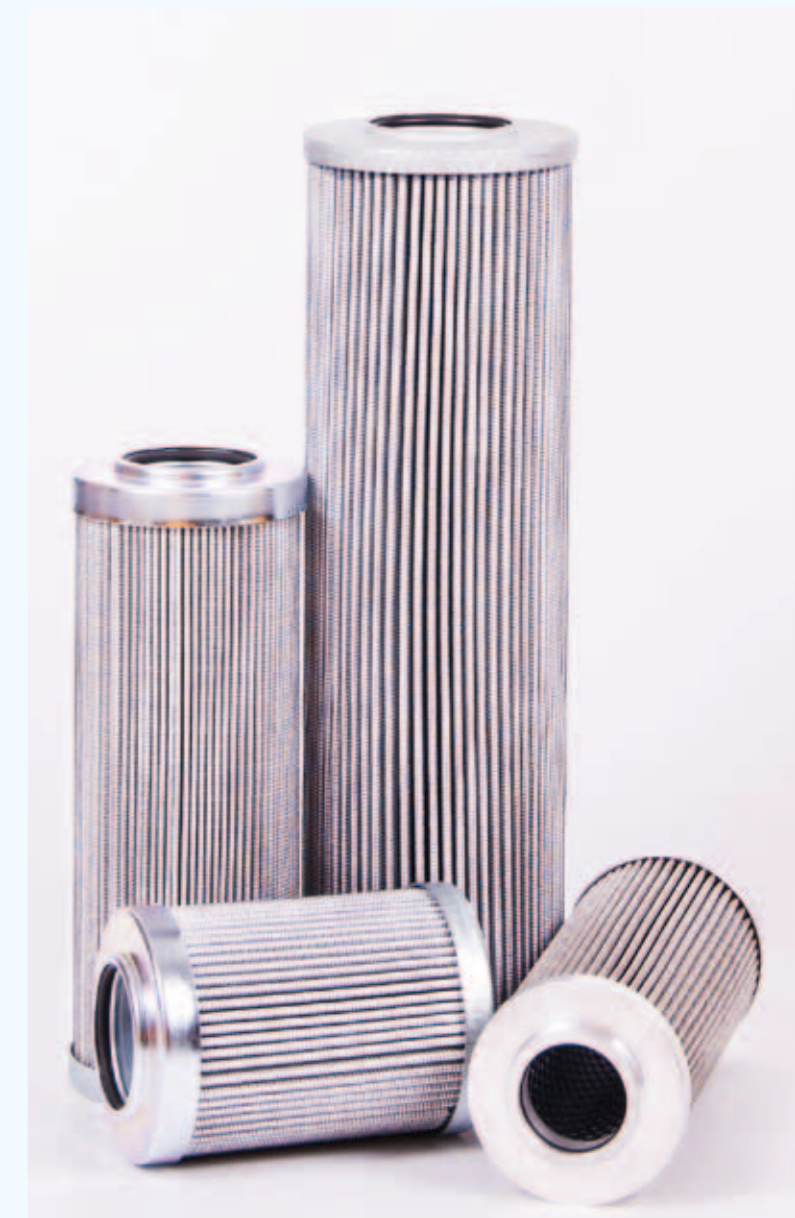
With a view to constant improvement, we have been deeply involved in the research for materials and manufacturing techniques that ensures the highest efficiency and reliability in our filters.

Particular attention is given to degree of filtration of the media and to type of adhesive specifically required for the applications.

- DUST COLLECTORS:

We develop high efficiency cartridges on demand.

Our cartridges for dust removal are designed to guarantee high level performances and are manufactured using various types of filtering media. Some models are designed to work in a back-pressure system thereby ensuring cyclical cleaning of the filtering media to avoid the premature increase in pressure drop. The cartridge connection system allows quick and easy installation and replacement procedures.



Heavy equipment

Heavy equipment refers to heavy-duty vehicles, specially designed for carrying out constructionwork, most frequently ones involving earth work operations, mining and cranes.

Sotras was born and took its first steps in the field of hydraulic filtration.

Thanks to its great experience and its flexibility,whilst specializing in manufacturing filters for compressors, Sotras has also developed an ever-growing range of high quality filters for construction machines enabling us to supply important filter manufactures to extend their product range.

Sotras can count on sophisticated pleating machines able to work with the latest types of filter media to produce cartridges of excellent quality.



Refrigeration and natural gas

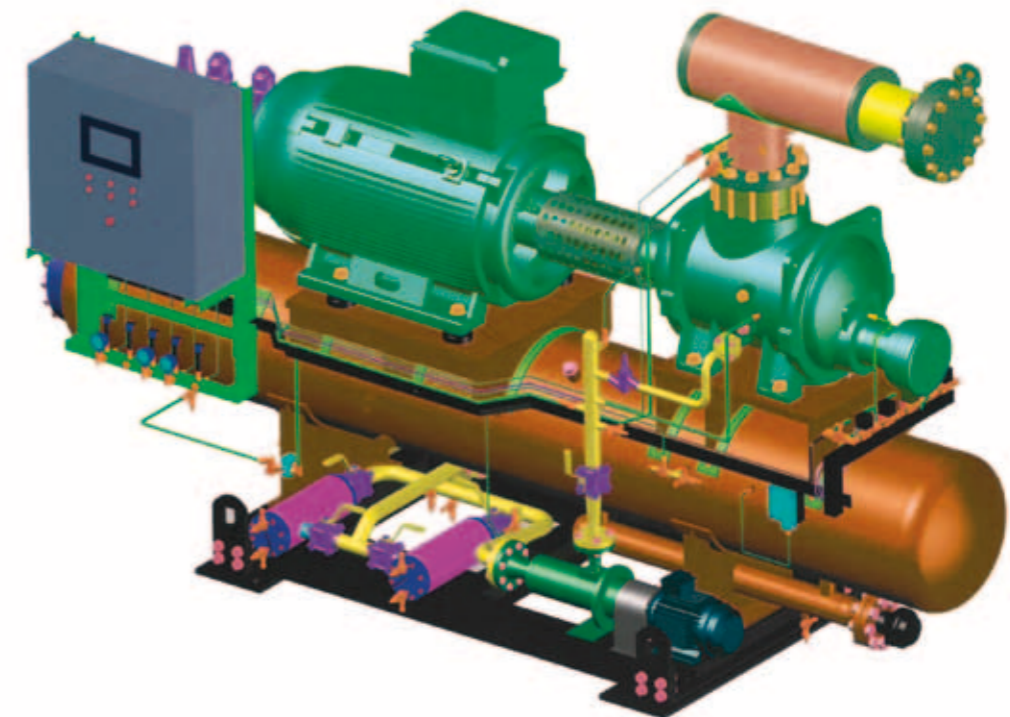
Due to our large experience in the compressed air field we have been requested to offer coalescing oil separators for refrigeration compressors where gases such as Freon and Ammonia are used and oil filters capable of meeting special requirements. This is a technology that improves performance and reduces energy costs of refrigeration systems.

Components such as filters and oil separators protect refrigeration systems from contaminants, prevent moisture and acid build-up, and regulate proper oil circulation. Oil is isolated early on the discharge line and returned to the compressor. The sole purpose of oil is to lubricate the compressor. When oil circulates freely it builds up a thin film on the internal surfaces of heat exchangers and acts as insulator. This robs the system of efficiency and raises energy consumption.

Employing a coalescing separator could offer additional benefits such as reduction of start-up time, required system oil volume and elimination of solid contaminant.

In parallel with the refrigeration business, the natural gas sector is continuously requiring more and more products to be developed according to its specific demand.

Today SOTRAS is the company that combines outstanding know-how in filtration and separation technologies, providing separator elements for Oil & Gas, Power Generation, Chemical industries and in all fields where filtration and separation require high technical competence and product quality.



Special applications: railways, marine and aerospace

Sotras designs and produces filters for special applications.

Evidence of the excellent level of quality of our products lies also in the fact that Sotras supplies high performance solutions where high reliability is required such as in the railways, marine and aerospace sectors. SOTRAS has received important homologation in these fields with certification for the high quality and safety of its products.

We guarantee that all materials used for our products undergo stringent quality tests and specific treatments which ensure a long life span and reliable performance.

For instance, considering the high temperature, high pressure and hard conditions at work in a compressor onboard a ship, every detail counts. This is why SOTRAS pays attention to every little detail on parts.

Factors such as adhesive, filter media, types of metals, etc. are crucial for safe and reliable operations.

Sotras has developed special technologies formulated to make its products withstand extreme environmental conditions such as high humidity and salinity levels and strong and sudden temperature ranges. This enables us to offer high performance solutions for high reliability applications such as in the railways, marine and aerospace sector.



Product quality supported by efficient service

High quality combined with flexibility and experience allows us to offer to our customers a complete service and support.

Thanks to its presence on the market dealing for many years with filtration and separation, Sotras has developed a flexible manufacturing and handling system even for small quantities allowing the Logistic Department to satisfy requirements in terms of variety, quality and speed.

Particular attention is reserved in selecting our suppliers and with a view to customer's continued satisfaction, Sotras has been deeply involved in the research for new materials as well as new and customised solutions specifically studied on demand.

Sotras employees, in Technical and Commercial Departments, are able to establish lasting relationships in several of the most common languages with our customers by meeting their expectations through their personal and organizational skills

We assist our customers in all the phases of our relationship, in product analysis and

performance not only for processing checks but also during the study and designing stages.

For many years our Technical department has given our customers support regarding claim analysis and returned goods for perceived defectiveness of the product.

We are always pleased to assist our customers!



Quality and tests

Sotras filters undergo stringent quality control and are frequently tested in order to ensure satisfactory operation in the application for which they are designed.

Evidence of the high quality of our products lies in the fact that Sotras manufactures original equipment for important OEMs, to some of which Sotras guarantees product exclusivity.

For years now, checks on all incoming products and the outgoing finished products are ruled by a Control Plan deriving from ISO TS 16949 for the automotive sector.

This document, which is constantly updated, indicates the control and related procedures of every step of the process and every characteristic of the product, including the project validation stages both of the actual process and of the products.

Our target has been to achieve the improvement of our product performance as well as efficiency and reliable repeat production. A special device has been designed to allow us to test the collapse or explosion resistance limits of our products under extreme working conditions at variable flow rates and at limit pressures.

In addition, laboratory devices have been used for the preventive analysis of production batches through simple but effective non destructive tests, such as the smoke test in order to detect product as well as process defects.

Based on ISO8573-2 and using Johnson and Balston tests we regularly check the residual aerosol oil content (ppm) in order to guarantee this filtering performance on our separator.

Another important test that is systematically carried out and applied to every production batch, concerns the stress analysis of the materials of our spin-on filters.



Warranty and certificates

We guarantee that filters produced by Sotras are free from defects either in materials or construction, always provided that the machinery is maintained in accordance with manufacturers' recommendations and filters are correctly installed and changed.

Sotras will replace any item found to be defective, in this case we recommended that the "Dissatisfaction Report" form is duly filled in to obtain a quick answer and solution to the issue.

Sotras will not be held responsible for any other replacement or contingencies or consequential loss.

Sotras' organization has been certified for its quality management systems since 1999.

Its first certification was in compliance with UNI EN ISO 9002-94.

In 2003, Sotras has obtained a new certification to UNI EN ISO 9001-2000 and in 2009 to UNI EN ISO 9001-2008.

Other certificates are available on demand.



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