

INNOVATIVE MEDIA SOLUTION
FOR HYDRAULIC APPLICATIONS

FORMULA UFI



www.ufihyd.com

A WINNING COMPANY



A SUCCESS STORY SINCE 1971

Universal Filter Italiana, now UFI Filters, was founded in Nogarole Rocca, in Italy, in 1971 as a supplier of filtration systems for the automotive market.

Some 10 years later, the company began working with the most important Formula 1 teams, becoming supplier of specific, tailor-made solutions guaranteeing top performance and taking the teams to the top of the championships.

In the 1990s, thanks to the vision and growth goals of its owners, UFI Filters began to expand its boundaries into new product development and new world markets.

In 1992, UFI Hydraulic Division was established, starting production of filtration solutions for hydraulic applications in Bolgare, in the North of Italy.

At the start of the new millennium, UFI Filters became the supplier to the most demanding German car and transmission manufacturers, providing fuel filters, oil and air modules and hydraulic filters, thus reinforcing its reputation as a global Original Equipment supplier to the world's leading car manufacturers.

In 2010, UFI entered the world of heat exchangers, specializing in the design, development and production of vacuum-brazed aluminium water-cooled heat exchangers.

Today, 6 of the 7 biggest automotive groups in the world work with UFI to develop complete filtration and lubrication systems.

The results obtained by the company can be attributed to the constant investment in research and

development (over 5% of turnover), allowing UFI to come up with innovative, exclusive solutions for its customers. Over the years, UFI has registered more than 200 patents.

The UFI Innovation Centers in Italy, India and China are equipped with sophisticated, advanced research and analysis tools for developing new products and filtration materials, both for automotive and hydraulic sectors.

UFI Filters now has over 4000 employees at 19 production sites, 3 innovation centers and 56 commercial offices.

Thanks to its Innovation centers and its wide experience, UFI Filters has developed different types of high performing media with specific Formulas, being the first in the market to introduce the synthetic fibres in fuel filters.

UFI filters meets also the requirements of maximum protection for hydraulic systems, with high efficiency and constant stability, thanks to high performance materials and filtration media, according to the market and technology demand.

UFI Filters knows the basis of filtration and masters the best filtering materials to make it work at best.

The company counts now six types of FormulaUFI:

FormulaUFI.Extreme
FormulaUFI.Stratiflex
FormulaUFI.Micron
FormulaUFI.Web
FormulaUFI.H2O
FormulaUFI.Cell

THE HYDRAULIC DIVISION



ENGINEERED FILTRATION SOLUTIONS

UFI Hydraulic Division is the branch of the UFI Group dedicated to hydraulic filtration, specialized in the design, manufacture and marketing of a comprehensive line of reliable, high efficiency hydraulic filters for mobile and industrial applications.

UFI Filters Hydraulic Division's mission is to create innovative and sustainable solutions in filtration for mobile and stationary applications. UFI Filters puts customers first and aims to provide them with exceptional quality products to enhance the efficiency of their hydraulic systems.

MOBILE HYDRAULIC APPLICATIONS

The supply of reliable hydraulic power to vehicles serving the arduous requirements of the construction industry safeguards vehicle utilization and productivity levels and avoids the expensive, time-consuming issues associated with un-planned downtime, maintenance and repair.

UFI Hydraulic Division has the knowledge and engineering technology to confront and master these issues with a proven range of filtration products for the mobile customer. Many well-known construction vehicle manufacturers and end users have placed their trust in UFI's ability for many years, both in Original Equipment and in Aftermarket.

STATIONARY HYDRAULIC APPLICATIONS

UFI Hydraulic Division has earned a solid reputation for quality and cost-efficient products also for CNC machines, presses, wind power applications and industrial hydraulic systems.

High-performance micro-fibre filtration media, with high voids-volume, warrant validated levels of dirt-holding capacity, coherent with the economic extended machine-life service-intervals demanded by the market. There is no limit for oil cleanliness and therefore filtration quality should be as efficient as layout, costs and pressure-drop will allow.

THE HYDRAULIC DIVISION BY NUMBERS



1992

Founded in 1992,
it's now a world leader
in hydraulic technology



7

7 application sectors:
from heavy duty, industrial
and power generation
to special applications



150

3 production plants
and over 150 employees
in 6 countries worldwide



6

6 lines of filter supplied:
suction, return, pressure,
off-line, transmissions, air

FORMULA UFI. **EXTREME**

EXTREME PERFORMANCES FOR VERY TOUGH CONDITIONS

DESCRIPTION

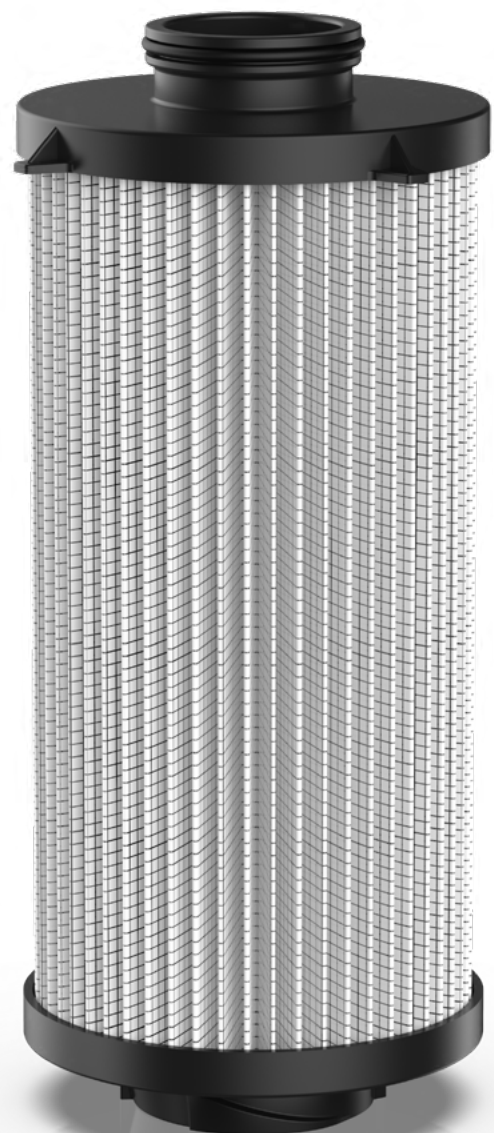
FormulaUFI.Extreme, that is used for example for extreme conditions in agricultural applications, is based on synthetic fibers to maximise the filter life, to reduce pressure drop keeping high filtration efficiency.

Filter efficiency is related to fibers size and distribution: these and other characteristics vary in order to optimize the performance for each specific application.

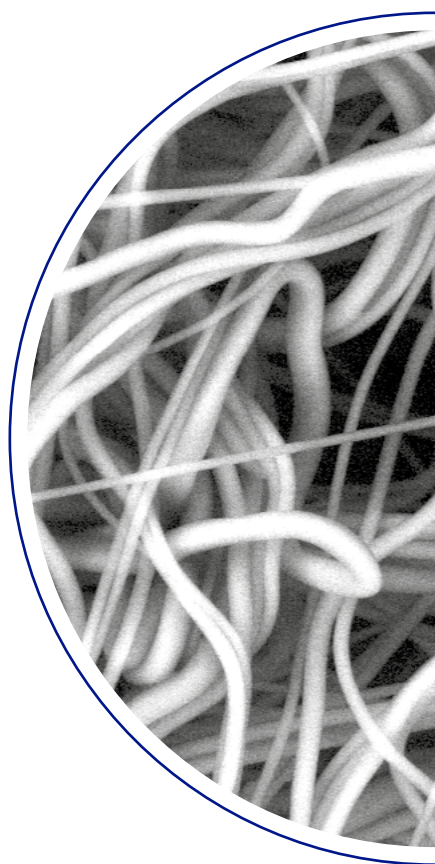
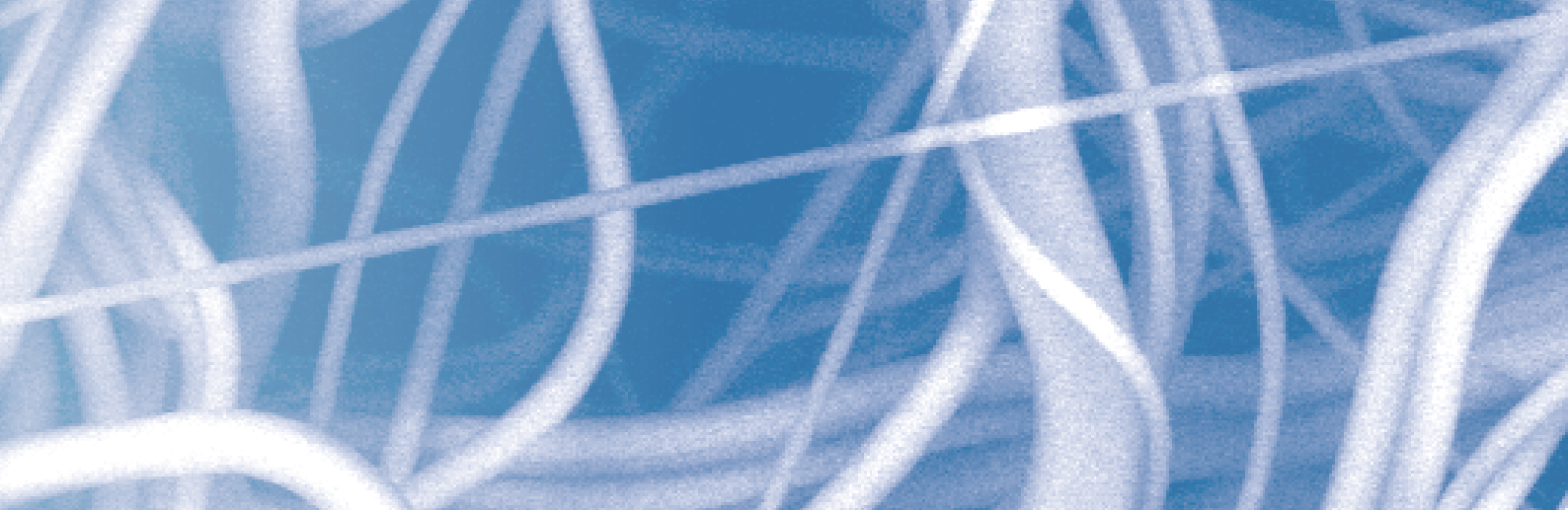
UFI has been a pioneer in the development of the FormulaUFI.Extreme.

APPLICATIONS

AGRICULTURAL
CONSTRUCTION
HEAVY DUTY
INDUSTRIAL
MATERIAL HANDLING
POWER GENERATION
PROTECTIVE EQUIPMENT



**SUCTION FILTER
FOR SPECIALTY
TRACTOR**



Microscope magnification

A WIDE RANGE OF **TAILOR-MADE SOLUTIONS**

PLUS

- + **Fully synthetic** multilayers media
- + **High filtration efficiency** over 99,5%
- + **Improved geometrical flexibility**
and filter downsizing
- + **Not affected by water**
- + **Best performances for constrained volumes**
- + Filter efficiency and life are **better than traditional media**
- + **Low pressure drop** compared to other media
- + Wide range of **tailor made solutions**

FORMULA **UFI** . **STRATIFLEX**

EVOLUTION OF PERFORMANCE BY FLEXIBLE COMBINATION OF MEDIA

DESCRIPTION

FormulaUFI.StratiFlex, that is used for example in the CNH Cursor Engine Family, is a combination of different layers (i.e. cellulose, glass fibres and hydrophobic barrier) and it's one of the most revolutionary Formulas that UFI Group has developed in the last years.

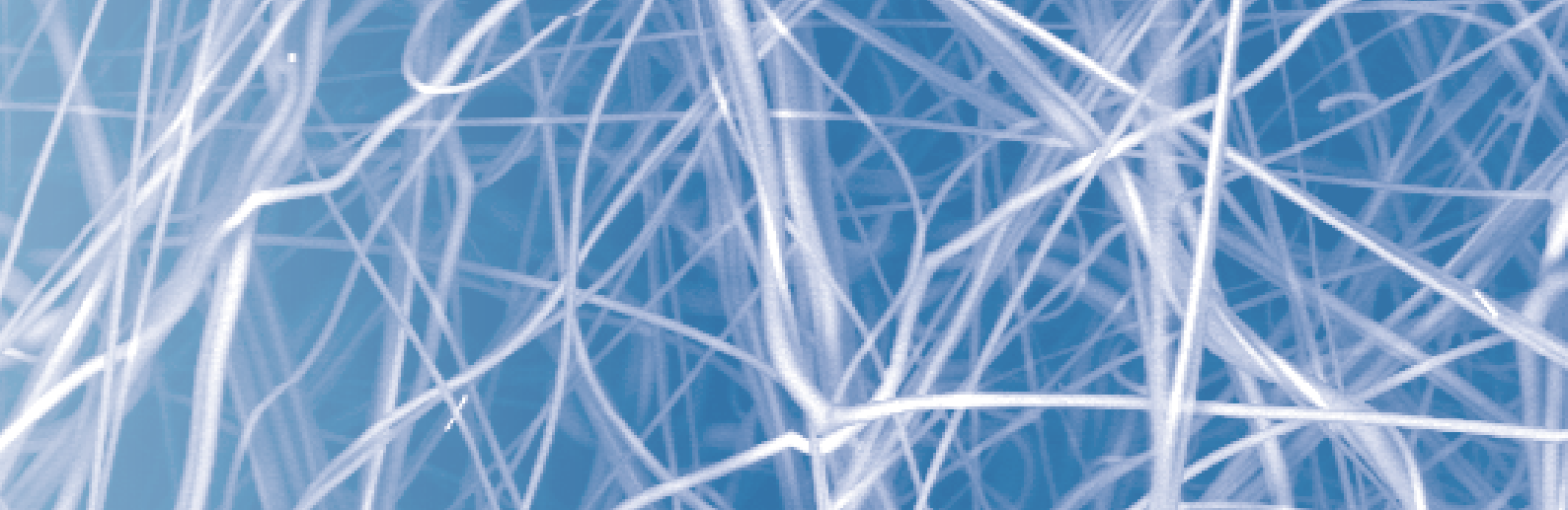
The combination of different materials guarantees the achievement of unique filtration efficiency together with a long filter life and water separation from fluid.

APPLICATIONS

AGRICULTURAL
CONSTRUCTION
HEAVY DUTY
INDUSTRIAL
MATERIAL HANDLING
POWER GENERATION

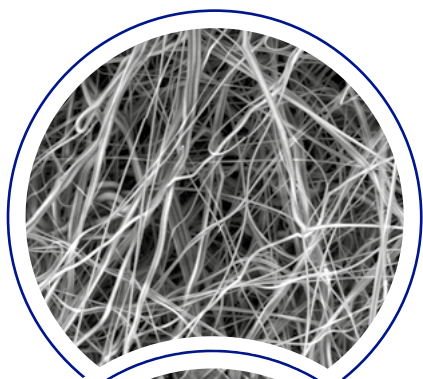


**CNH CURSOR
ENGINE FAMILY**

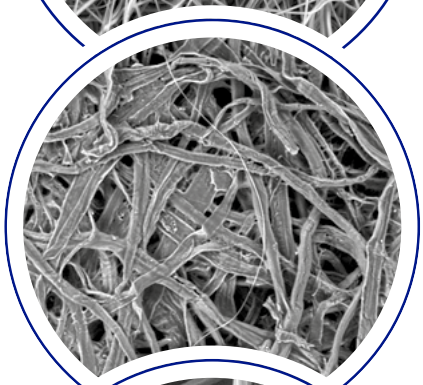


DIFFERENT MATERIAL LAYERS COMBINATIONS ARE POSSIBLE

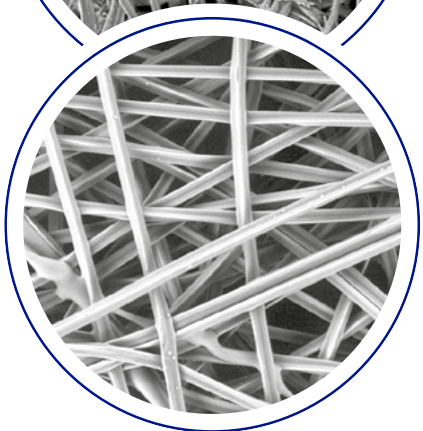
MELTBLOWN



CELLULOSE



SPUNBOND



Microscope magnification

PLUS

- + **Combination of different layers and media,** explores new potential in demanding applications
- + FormulaUFI.StratiFlex exploits the performances of the FormulaUFI.Extreme with the combination of different components in order to achieve the **highest water in fluid separation**
- + **High customisation capacity**
- + **High performance**
- + **High filtration efficiency**

FORMULA UFI.MICRON

HIGHEST FILTRATION PERFORMANCE, DOWN TO ABSOLUTE BETA RATIO

DESCRIPTION

FormulaUFI.Micron, that is used e.g. in wind power generation and industry applications, is based on inorganic fiber impregnated with resins and consists of multiple layers, up to 6.

It provides first class filtration efficiency and low differential pressure drop over the whole lifetime of the element and is available in 5, 7, 12, 16 and 21 $\mu\text{m}_{(0)}$. FormulaUFI.Micron with multilayer structure retains even smaller particles than indicated on the reference ratio of each filter media.

Absolute rated high-efficiency glass fiber media elements are the most suitable selection for achieving target ISO cleanliness codes on systems with components that are sensitive to contamination (wind turbine, servo valves, piston pumps, etc.).

APPLICATIONS

AGRICULTURAL
CONSTRUCTION
HEAVY DUTY

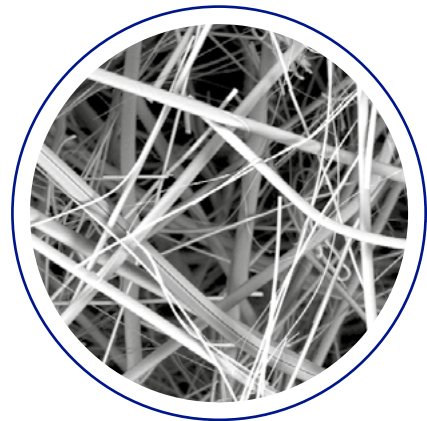
INDUSTRIAL
MATERIAL HANDLING
POWER GENERATION

PLUS

- + Extended service intervals/Longer service life
- + High Dust Holding Capacity (DHC)
- + Low pressure drop and improved differential pressure stability
- + Optimum retention rate



**GRF SERIES WITH CORELESS
IRF ELEMENT FOR WIND TURBINE**



Microscope magnification

THE METALLIC MESH TRAPPING IMPURITIES IN THE SYSTEM

DESCRIPTION

FormulaUFI.Web, that is used e.g. in the ZF Automatic Transmission Filter and in pressure line as last chance filter, provides protection to sensitive and critical components, e.g. in the Danfoss Hydraulic Integrated Circuit and in the Carraro specialty tractors as protection of the hydraulic power lift.

FormulaUFI.Web is based on stainless steel mesh having such characteristics of good strength, flexibility, wide range of fluids compatibility, high temperature resistance and extremely low pressure drop with high flow rates as required for suction applications.

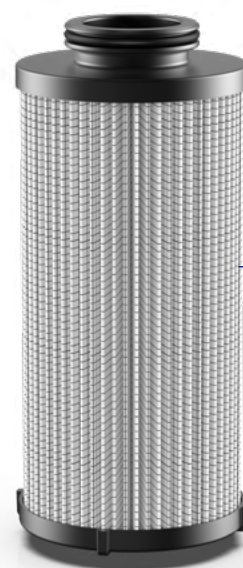
APPLICATIONS

AGRICULTURAL
CONSTRUCTION
HEAVY DUTY

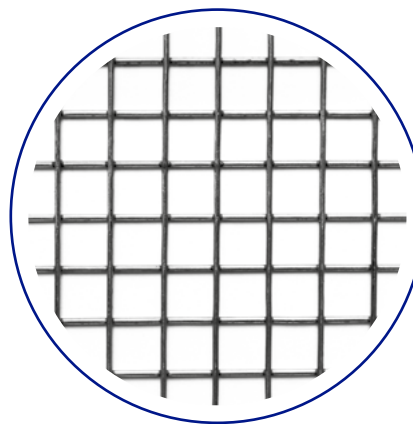
INDUSTRIAL
MATERIAL HANDLING
POWER GENERATION

PLUS

- + **Very robust structure** and high level of heat, chemical, corrosion, abrasion and differential pressure resistance.
- + **Geometrical structure:** precise and uniform surface area.
- + **Multiple construction layout** for multiple filtration rate requests.



**ZF AUTOMATIC
TRANSMISSION FILTER**



Microscope magnification

FORMULA UFI.H2O

STOPS THE WATER: ABSORPTION OR SEPARATION

DESCRIPTION

FormulaUFI.H2O, that is used for e.g. in off-line filters or in mobile filtration units, is based on super-absorbent polymer technology with a high affinity for water absorption and removes up to 80% of the free water present in the oil.

FormulaUFI.H2O works by absorption and ensures a high water retention capacity in all applications subject to water infiltration.

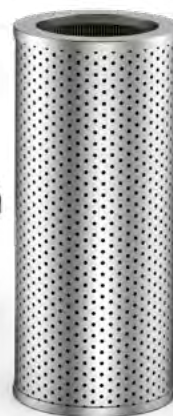
APPLICATIONS

AGRICULTURAL
CONSTRUCTION
HEAVY DUTY

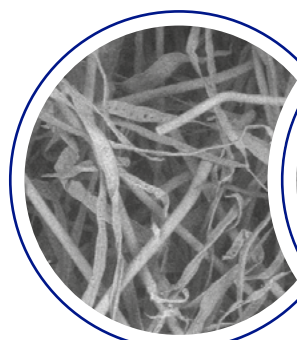
INDUSTRIAL
MATERIAL HANDLING
POWER GENERATION

PLUS

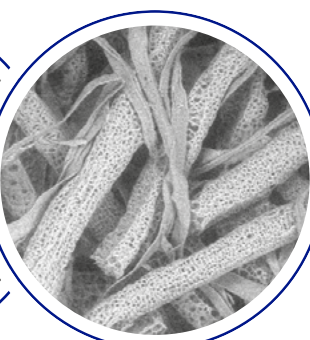
- + High water separation performances, in particular when used in combination with other layers
- + Always coupled with high quality meltblown to increase filter life
- + Very high filtration efficiency



**OFFLINE FILTER, FOF SERIES,
WITH ERF ELEMENT**



DRY



WET

Microscope magnification

FORMULA UFI.CELL

FROM NATURE, THE BASIC ELEMENT OF FILTRATION

DESCRIPTION

FormulaUFI.Cell is based on paper fibers made from pure cellulose impregnated with resin to maximize the filter life and reduce pressure drop.

Cellulose provides effective filtration for a variety of hydraulic applications, like concrete pumps and mining vehicles. It is also used for air breathers, return line filters and spin-on cartridges, in which a good quality-price ratio should be recommended. Cellulose presents a porous surface, so that filtering media are classified on average pore size.

APPLICATIONS

AGRICULTURAL
CONSTRUCTION
HEAVY DUTY

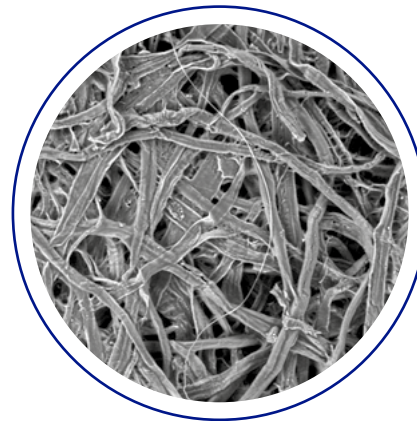
INDUSTRIAL
MATERIAL HANDLING
POWER GENERATION

PLUS

- + **Improved performances** in mechanical stability and filter life
- + **High stiffness to retain stability** also during low temperature conditions
- + **Effective filtration** for a wide variety of petroleum-based fluids



**TANK TOP RETURN LINE FILTER,
INBUILT BREATHER, FRB SERIES**



Microscope magnification

FORMULA
UFI.EXTREME

EXTREME PERFORMANCES
FOR VERY TOUGH CONDITIONS

FORMULA
UFI.STRATIFLEX

EVOLUTION OF PERFORMANCE
BY FLEXIBLE COMBINATION OF MEDIA

FORMULA
UFI.MICRON

HIGHEST FILTRATION PERFORMANCE,
DOWN TO MICRONS

FORMULA
UFI.WEB

THE METALLIC MESH
TRAPPING IMPURITIES IN THE SYSTEM

FORMULA
UFI.H2O

STOPS THE WATER:
ABSORPTION OR SEPARATION

FORMULA
UFI.CELL

FROM NATURE, THE BASIC
ELEMENT OF FILTRATION



UFI HYDRAULIC DIVISION
UFI FILTERS HYDRAULICS S.P.A.

Via S. Chierico, 24 - Bolgare (BG) - Italy
T +39 0354493831 - F +39 035843743
info.ufihyd@it.ufifilters.com

UFI FILTERS
USA INC.

50 W. Big Beaver Road,
Suite 440 Troy, MI
48084 - USA
T +1 2484207448

UFI FILTERS
DO BRASIL LTDA

Av. Prefeito Luis Latorre, 9450
Galpão 15 - Distrito Industrial
Jundiaí - São Paulo Zipcode:
13209-430 - Brazil
T +55 11 2923-6554

UFI FILTERS
INDIA PVT LTD.

Plot no .D-222/ 47 ,T.T.C
M.I.D.C Shirwane
Nerul Navi - Mumbai
400706 - India
T +91 2220875755
T +91 8744071920

UFI FILTERS
KOREA LIMITED

42, Hwanggeum 3-ro,
Yangchon-eup
Gimpo-si, Gyeonggi-do,
10048 - Korea
T +82 319861341
F +82 319861349

SOFIMA INDUSTRIAL
FILTER SHANGHAI CO, LTD

Floor 1, building 2, No.128,
Yuantong Road, Datuan Town,
Pudong new district, Shanghai
City, 201314 Shanghai - China
T +86 2139792688