

— for precision machining —



believers in superior filtration

www.comatfilters.com

ABOUT US

Comat was founded 35 years ago in response to a clear need for better coolant management solutions in the metalworking industry.

Today, Comat is a leading player in the micro-filtration of neat cutting oil used in high precision applications.

OUR MISSION

Our mission is to enable our customers to achieve excellence in metalworking.

For this reason, our superfiltration systems are engineered to filter neat cutting oil at 3 micron (better than brand new oil), constantly maintaining a stable temperature ($\pm 0.5^{\circ}$), without compromising on the filtration levels or flow rates so to ensure always the maximum consistency over time. In addition, our superfiltration systems minimize the running costs, so to achieve the lowest cost per liter of the oil filtered.

OUR VALUES

We believe that our values are the backbone of our success.

1. Customer first
2. Passion for metalworking
3. Belief in technology
4. Ethics and integrity
5. Respect for the environment

The Board of
Comat srl



OUR HISTORY

Comat **engineers, builds and sells worldwide filtration systems for the treatment of neat cutting oil used in the machine tool industry.**

1988

Foundation of Comat

to address customer needs in metalworking fluids management

1993

Independent manufacturing

of the first system in the new production unit

1999

TÜV ISO 9001

Comat achieves TÜV certification

2002-2009

European strategy

Comat enters into the French, German, Spanish and Swiss markets

2010

Doubling of production site

with total energy independence

2015

Digitalisation of filters

today known as Intelligent Performance on the EVO series

2016-2019

International strategy

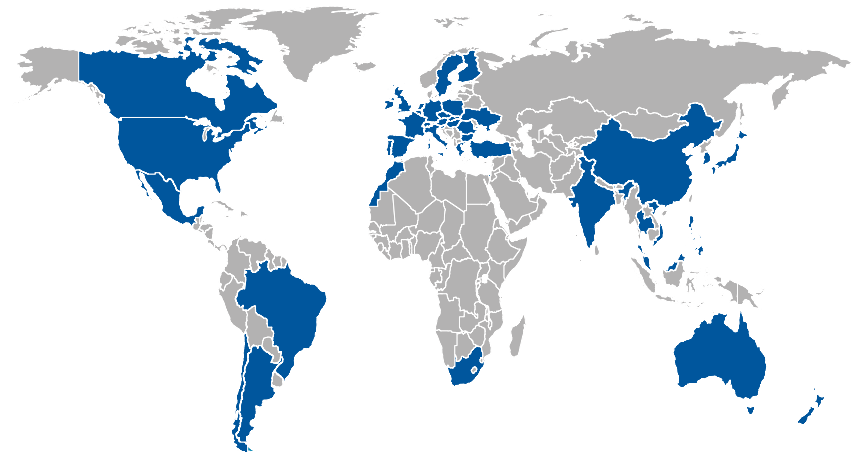
Comat enters into the Asian, Chinese and North American markets

OGGI

Our new house

with a production area of 3,900 m² and an office building of 980 m²

Today, **more than 20,000 machine-tools** of the most important manufacturers use our technology worldwide, **with more than 120,000,000 liters of metalworking oil Superfiltered every minute.**



FILTRATION TECHNOLOGIES FOR CUTTING OIL

Quality productions and industry-leaders nowadays ask for a filtration quality of 3-5 μm .

Only a few of the filtration technologies available in the market can meet such standard better than brand new cutting oil.

BAND FILTERS	The filter media consists of a continually moving fabric band across which the fluid flows for gravity with a low pressure differential
CARTRIDGE FILTERS	The filter media consists of single use cartridges to be replaced when clogged by the contaminant
CENTRIFUGES	The contaminant particles are separated from the fluid by centrifugation of the contaminated fluid
BACKWASH CARTRIDGE FILTERS	The filter media consists of cartridges which are periodically refreshed through backwash and therefore have to be replaced less frequently than non-backwashed cartridges
PRE-COAT FILTERS	The filter media consists of support elements coated with a filter-aid (e.g. cellulose, silica) which is periodically and automatically renovated over time

FILTRATION RANGE

Technology:	Filtration Range at required flowrate:
BAND FILTERS	> 30 μm
CARTRIDGES (standard pores)	> 10 μm
CENTRIFUGES	< 10 μm
CARTRIDGES (fine pores)	< 10 μm
BACKWASH FILTERS	> 3 μm
PRE-COAT FILTERS	> 3 μm



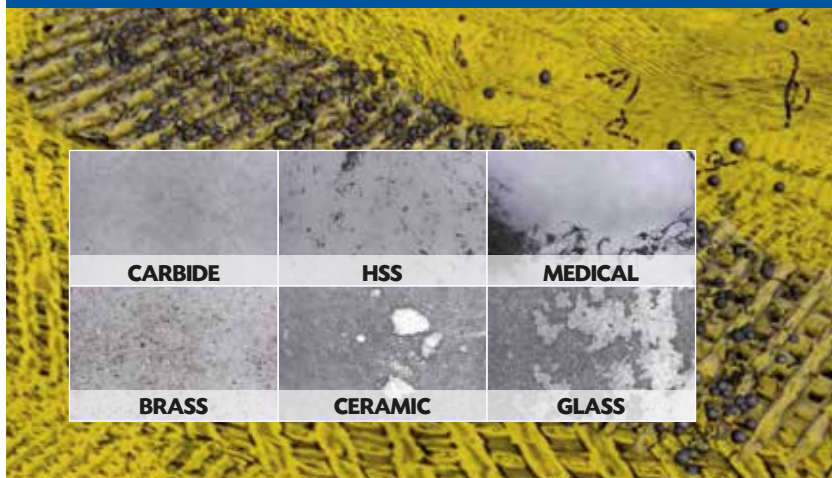
Comat Superfiltration Systems are the best solution for those clients that don't compromise on excellence.

OUR SUPERFILTRATION TECHNOLOGY

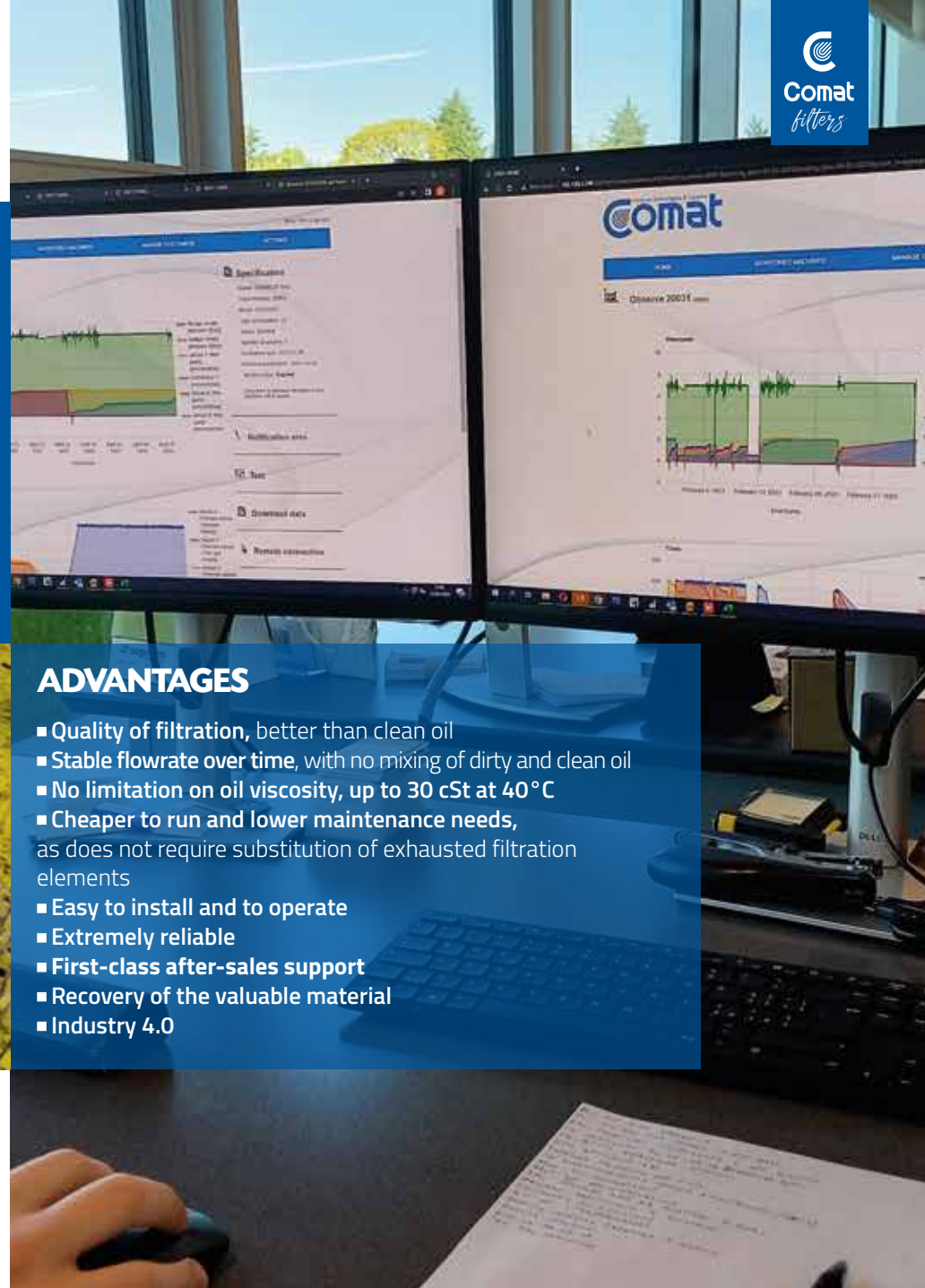
We believe that excellence in metalworking requires leading-edge tools and superior filtration quality

For this reason, we have created Comat and developed the concept of Superfiltration

Superfiltration Technology, with continuously regenerating filtering media (pre-coat), is the process by which contaminant particles larger than 3 μm are removed from cutting fluid while the latter is maintained at a stable desired temperature.



Comat can handle any type of contaminant differently from the majority of competing systems, that struggle in particular with HSS and medical steel



ADVANTAGES

- Quality of filtration, better than clean oil
- Stable flowrate over time, with no mixing of dirty and clean oil
- No limitation on oil viscosity, up to 30 cSt at 40°C
- Cheaper to run and lower maintenance needs, as does not require substitution of exhausted filtration elements
- Easy to install and to operate
- Extremely reliable
- First-class after-sales support
- Recovery of the valuable material
- Industry 4.0

EVO: INTELLIGENT PERFORMANCE

Comat EVO filters are equipped with «Intelligent Performance Technology»

Filter performance is **self adjusted based on the effective working-rate** of the connected machine tool(s)

Comat EVO filters can be **monitored, controlled & adaptively optimized in real time** using:

- Onboard Control
- Remote Panel
- PCs
- Tablets & Smartphones

R&D UPDATES

New Automated Loading and Weighing System for filter media suited to C120-180-240 models:

- Allows for accurate and automatic dosing of the filter media
- Enables control (also remotely) over the quantity of media consumed during the filtration cycle
- Ensures uninterrupted execution of two filtration cycles without operator supervision

New compact dredged tank suited to C120-180-240 models

- Ensures automated removal of sludge
- Provides an optimal sludge drying process



Comat filters are **easy to install, easy to operate and extremely reliable.**

CUSTOMER SERVICE

At Comat, we are there for our customers when it matters.

Thanks to the data acquired in real time by the Remote Monitoring Control, our Technical Service is able to provide a **First-level Help Desk**, guaranteeing to the customer high-level, fast and reliable support and assistance aimed at clearing every risk of machine stop.



AFTER - SALES

As directly testified by our customers, the **Comat Technical Service stands out for professionalism, confidence and expertise** in every intervention field:

- Telephonic help desk
- Remote control (EVO version)
- Excellent Technical support for preventive / corrective maintenance
- Video assistance for comprehensive troubleshooting
- Client visit



Our after-sales team – focused on **zeroing machine down time** – is the key to our success.

APPLICATION RANGE

The application range of the Superfiltration Technology is **mainly dedicated to surface finishing applications** where tolerances and roughness must be strictly controlled, otherwise the quality of the products would be compromised.

For this reason our systems are connected with success to:

- Grinding machines
- Honing machines
- Lapping machines
- Polishing machines
- Sharpening machines

Our product range spans **from filters for single machine applications to centralised systems** for large manufacturing sites.

APPLICATION SECTORS precision machining

- Aerospace Industry
- Automotive Industry (Boring, Honing, Precision Grinding of Engines, Axle Cases, Transmissions)
- Ball Bearings
- Broaching & Deep Drilling
- Electronic components
- Lamination
- Luxury Watches
- Machine Tool Manufacturing
- Medical Industry
- Saw Blades Manufacturing
- Tools Manufacturing



Product range “C SERIES” - for precision machining

Model	C60	C120	C180	C240	C360	C480	C600	C720	C840	C960
Application	Precision machining									
Machines Managed	#1 machine tool	#1 machine tool	up to #2 machine-tools	up to #2 machine-tools	up to #2-3 machine-tools	up to #4-5 machine-tools	up to #5-6 machine-tools	up to #6-8 machine-tools	up to #7-9 machine-tools	up to #8-10 machine-tools
Filtration Capacity	60 l/min	120 l/min	180 l/min	240 l/min	360 l/min	480 l/min	600 l/min	720 l/min	840 l/min	960 l/min
Fluid Compatibility	All straight cutting oils (no emulsions)									
Contaminants	Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics									
Cleanliness class superfilter oil	NAS class #7-8 ISO class #4406 17/15/12 - class #18/16/13									
Dimension	1,600 x 980 x h. 2,275 mm	2,095 x 1,330 x h. 2,225 mm	2,660 x 1,495 x h. 2,255 m	2,660 x 1,495 x h. 2,255 m	2,035 x 2,945 x h. 2,420 mm	3,880 x 2,400 x h. 2,355 mm	3,880 x 2,400 x h. 2,355 mm	3,880 x 2,400 x h. 2,355 mm	4,090 x 2,460 x h. 2,435 m	4,090 x 2,460 x h. 2,435 m
Tank capacity	720 l	1,050 l	2,000 l	2,000 l	3,750 l	5,400 l	5,400 l	5,400 l	7,200 l	7,200 l
Filter Media	Vegetal and Mineral									
Filtering Area	1.8 m ²	3.0 m ²	4.2 m ²	5.3 m ²	9.0 m ²	14.2 m ²	14.2 m ²	18.0 m ²	27.0 m ²	27.0 m ²
Filter Media Consumption per Workcycle	1.3 kg	2.1 kg	3.0 kg	4.0 kg	6.0 kg	10.0 kg	10.0 kg	12.0 kg	18.0 kg	18.0 kg

Model: C60

for 1 machine-tool



Filtration Capacity

60 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

1,600 x 980 x h. 2,275 mm

Tank capacity

720 l

Filter Media

Vegetal and Mineral

Filtrating Area

1.8 m²

Filter Media Consumption

1.3 kg per workcycle

FEATURES

- Semi-automatic work-cycle
- Eco-mode
- Automatic electronic flow regulation
- Power interruptions management
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTOR
precision machining

Model: C120

for 1 machine-tool



APPLICATION SECTOR
precision machining

Filtration Capacity

120 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

2,095 x 1,330 x h. 2,225 mm

Tank capacity

1,050 l

Filter Media

Vegetal and Mineral

Filtering Area

3.0 m²

Filter Media Consumption

2.1 kg per workcycle

FEATURES

- Semi-automatic work-cycle
- Eco-mode
- Automatic electronic flow regulation
- Power interruptions management
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



Model: C180

up to 2 machine-tools



Filtration Capacity

180 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel,
Precious metals, Cast iron, Iron alloys,
Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

2,660 x 1,495 x h. 2,255 mm

Tank capacity

2,000 l

Filter Media

Vegetal and Mineral

Filtering Area

4.2 m²

Filter Media Consumption

3.0 kg per workcycle

FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



APPLICATION SECTOR
precision machining

Model: C240

up to 2 machine-tools



Filtration Capacity

240 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

Dimensions

2,660 x 1,495 x h. 2,255 mm

Tank capacity

2,000 l

Filter Media

Vegetal and Mineral

Filtering Area

5.3 m²

Filter Media Consumption

4.0 kg per workcycle

FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



APPLICATION SECTOR
precision machining

Model: C360

up to 2-3 machine tools



APPLICATION SECTOR
precision machining

Filtration Capacity

360 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel,
Precious metals, Cast iron, Iron alloys,
Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 μ m nominal

Dimensions

2,035 x 2,945 x h. 2,420 mm

Tank capacity

3,750 l

Filter Media

Vegetal and Mineral

Filtrating Area

9.0 m²

Filter Media Consumption

6.0 kg per workcycle

FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



Model: C480

up to 4-5 machine-tools



Filtration Capacity

480 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

3,880 x 2,400x h. 2,355 mm

Tank capacity

5,400 l

Filter Media

Vegetal and Mineral

Filtering Area

14.2 m²

Filter Media Consumption

10.0 kg per workcycle

FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



APPLICATION SECTOR
precision machining

Model: C600

up to 5-6 machine-tools



Filtration Capacity

600 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

3,880 x 2,400 x h. 2,355 mm

Tank capacity

5,400 l

Filter Media

Vegetal and Mineral

Filtering Area

14.2 m²

Filter Media Consumption

10.0 kg per workcycle

FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



APPLICATION SECTOR
precision machining

Model: C720

up to 6-8 machine-tools



Filtration Capacity

720 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

3,880 x 2,400 x h. 2,355 mm

Tank capacity

5,400 l

Filter Media

Vegetal and Mineral

Filtering Area

18.0 m²

Filter Media Consumption

12.0 kg per workcycle

FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



APPLICATION SECTOR
precision machining

Model: C840

up to 7-9 machine-tools



Filtration Capacity

840 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

4,090 x 2,460 x h. 2,435 mm

Tank capacity

7,200 l

Filter Media

Vegetal and Mineral

Filtering Area

27.0 m²

Filter Media Consumption

18.0 kg per workcycle

FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



APPLICATION SECTOR
precision machining

Model: C960

up to 8-10 machine-tools



Filtration Capacity

960 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Carbide, Cermet, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 µm nominal

Dimensions

4,090 x 2,460 x h. 2,435 mm

Tank capacity

7,200 l

Filter Media

Vegetal and Mineral

Filtering Area

27.0 m²

Filter Media Consumption

18.0 kg per workcycle

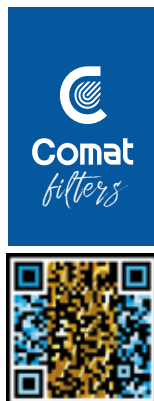
FEATURES

- Automatic work-cycle
- Eco-mode
- Automatic setting of filtration flowrate
- Power interruptions management
- Magnetic separator
- Filter media vacuum loader
- Automatic sludge conveyor
- HMI colour touch-screen
- Remote assistance kit for start-up
- Software for remote monitoring
- Remote monitoring optimisation and control

example of application



APPLICATION SECTOR
precision machining



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