



believers in superior filtration

www.comatfilters.com

ABOUT US

Comat was founded over 30 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 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 (+/- 0.2 degrees), 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



GIORGIO COLOMBO
Founding Partner,
Chairman & CEO



ANDREA COLOMBO
Administration Director



DANIELE CASSANI
Founding Partner,
Technical & Sales Director

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

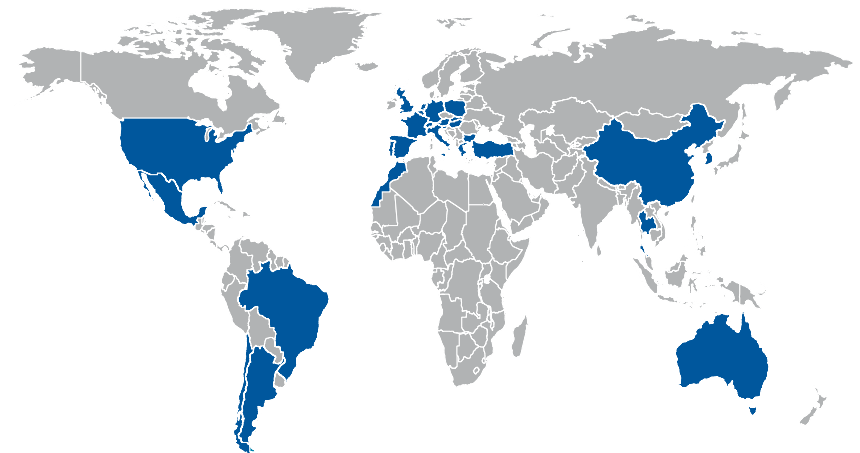
next 2020

Construction of Plant 2

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.

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**





BASIC AND EVO

Each of our filters is offered in **BASIC and EVO version**.

Basic filters are for the «die-hard», cost focused clients that want to maximise quality at the minimum cost.



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

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

CUSTOMER SERVICE SUPPORT

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



OUR CREDENTIALS

We supply leading manufacturers and our filters equip top brands machine tools such as:



Model: C60

for 1 machine tool



APPLICATION SECTORS
precision machining

Filtration Capacity

60 l/min nominal

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

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

Filtration Rating

3 μ m nominal

Dimensions

2,200 x 1,000 x h2,050 mm

Fluid Volume

860 l

Filter Media

Cellulose or Silica

Filtering Area

1.9 m²

Filter Media Consumption

1.3 kg per workcycle

FEATURES

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

example of application



Model: C120

for 1 machine tool



APPLICATION SECTORS
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 μ m nominal

Dimensions

2,147 x 1,336 x h2,141 mm

Fluid Volume

1,000 l

Filter Media

Cellulose or Silica

Filtrating Area

3.1 m²

Filter Media Consumption

2.1 kg per workcycle

FEATURES

- Semi-Automatic workcycle
- Eco-Mode
- Power interruptions management
- Automatic electronic flow regulation
- Dirty oil inlet kit
- Dirty oil lift pump
- Clean oil distribution pump
- Fine integrated temperature control
- 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, Cermets, PCD, High Speed Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Ceramic, Plastics

Filtration Rating

3 μ m nominal

Dimensions

2,645 x 1,490 x h2,253 mm

Fluid Volume

1,500 l

Filter Media

Cellulose or Silica

Filtrating Area

4.4 m²

Filter Media Consumption

3 kg per workcycle

FEATURES

- Semi-Automatic workcycle
- Eco-Mode
- Power interruptions management
- Automatic electronic flow regulation
- Magnetic separator
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTORS
precision machining

Model: C270

up to 3-4 machine tools



APPLICATION SECTORS
precision machining

Filtration Capacity

270 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

2,570 x 2,000 x h2,030 mm
(h. 2,700 mm with automatic vacuum system)

Fluid Volume

2,850 l

Filter Media

Cellulose or Silica

Filtering Area

7.5 m²

Filter Media Consumption

5 kg per workcycle

FEATURES

- Automatic workcycle
- Eco-Mode
- Power interruptions management
- Automatic electronic flow regulation
- Magnetic separator
- Filter media loader
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



Model: C540

up to 5-6 machine tools



Filtration Capacity

540 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

3,860 x 2,190 x h2,200 mm
(h. 3,060 mm with automatic vacuum system)

Fluid Volume

5,400 l

Filter Media

Cellulose or Silica

Filtering Area

15 m²

Filter Media Consumption

10 kg per workcycle

FEATURES

- Automatic workcycle
- Eco-Mode
- Power interruptions management
- Automatic electronic flow regulation
- Magnetic separator
- Filter media loader
- Automatic sludge conveyor
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTORS
precision machining

Model: C810

up to 7-9 machine tools



APPLICATION SECTORS
precision machining

Filtration Capacity

810 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

4,000 x 2,460 x h.2,500 mm
(h. 3,300 mm with automatic vacuum system)

Fluid Volume

7,200 l

Filter Media

Cellulose or Silica

Filtering Area

22.5 m²

Filter Media Consumption

15 kg per workcycle

FEATURES

- Automatic workcycle
- Eco-Mode
- Power interruptions management
- Automatic electronic flow regulation
- Magnetic separator
- Filter media loader
- Automatic sludge conveyor
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTORS

automatic lathe machines

Superfiltration systems are more and more applied, with success, to **automatic lathe units** to filter oil recovered from:

- Chips centrifugation
- The periodical emptying of the tanks

and also for:

- The oil used at high pressure for drilling process and tapping

We also **engineer** and **build customized highly tailored solutions** for specific client needs



Model: C0.3

up to 3-4 automatic lathes



Filtration Capacity

180 – 360 l/day

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Steel, Alloy Steel, Precious metals,
Cast iron, Iron alloys, Copper alloys,
Aluminum, Plastics

Filtration Rating

3 µm nominal

Dimensions

1,600 x 1,000 x h.2,200 mm

Fluid Volume

720 l
(250 clean oil – 250 dirty oil – 220 recycle)

Filter Media

Cellulose or Silica

Filtering Area

1.9 m²

Filter Media Consumption

1.3 kg per workcycle

FEATURES

- Semi-Automatic workcycle
- Eco-Mode
- Automatic new oil refilling
- Automatic dirty oil inlet control kit
- Power interruptions management
- Recirculation tank automatic refilling
- Dirty oil transfer pump flowrate adjustment
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTORS
automatic lathe machines

Model: C0.8

up to 7-8 automatic lathes



APPLICATION SECTORS
automatic lathe machines

Filtration Capacity

400 – 800 l/day

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Steel, Alloy Steel, Precious metals,
Cast iron, Iron alloys, Copper alloys,
Aluminum, Plastics

Filtration Rating

3 µm nominal

Dimensions

2,600 x 1,500 x h.2,350 mm
(h. 3,200 mm with automatic vacuum system)

Fluid Volume

2,500 l
(1,000 clean oil – 1,000 dirty oil – 500 recycle)

Filter Media

Cellulose or Silica

Filtrating Area

4.4 m²

Filter Media Consumption

3 kg per workcycle

FEATURES

- Automatic workcycle
- Eco-Mode
- Automatic new oil refilling
- Automatic dirty oil inlet control kit
- Filter media loader
- Power interruptions management
- Recirculation tank automatic refilling
- Dirty oil transfer pump flowrate adjustment
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



Model: C1.5

up to 12-15 automatic lathes



Filtration Capacity

700 – 1,500 l/day

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Steel, Alloy Steel, Precious metals,
Cast iron, Iron alloys, Copper alloys,
Aluminum, Plastics

Filtration Rating

3 µm nominal

Dimensions

2,500 x 2,000 x h.2,350 mm
(h. 3,200 mm with automatic vacuum system)

Fluid Volume

4,000 l
(1,600 clean oil – 1,600 dirty oil – 800 recycle)

Filter Media

Cellulose or Silica

Filtering Area

7.5 m²

Filter Media Consumption

5 kg per workcycle

FEATURES

- Automatic workcycle
- Eco-Mode
- Automatic new oil refilling
- Automatic dirty oil inlet control kit
- Filter media loader
- Power interruptions management
- Recirculation tank automatic refilling
- Dirty oil transfer pump flowrate adjustment
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTORS
automatic lathe machines

Model: C3.0

up to 20-30 automatic lathes



Filtration Capacity

1,500 – 3,000 l/day

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Steel, Alloy Steel, Precious metals,
Cast iron, Iron alloys, Copper alloys,
Aluminum, Plastics

Filtration Rating

3 µm nominal

Dimensions

3,800 x 2,000 x h.2,350 mm
(h. 3,200 mm with automatic vacuum system)

Fluid Volume

6,000 l
(2,400 clean oil – 2,400 dirty oil – 1,200 recycle)

Filter Media

Cellulose or Silica

Filtrating Area

15 m²

Filter Media Consumption

10 kg per workcycle

FEATURES

- Automatic workcycle
- Eco-Mode
- Automatic new oil refilling
- Automatic dirty oil inlet control kit
- Filter media loader
- Power interruptions management
- Recirculation tank automatic refilling
- Dirty oil transfer pump flowrate adjustment
- Automatic sludge conveyor
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTORS
automatic lathe machines

Model: C4.5

up to 35-45 automatic lathes



Filtration Capacity

3,000 – 4,500 l/day

Fluid Compatibility

All straight cutting oils (no emulsions)

Contaminants

Steel, Alloy Steel, Precious metals,
Cast iron, Iron alloys, Copper alloys,
Aluminum, Plastics

Filtration Rating

3 µm nominal

Dimensions

3,800 x 2,200 x h.2,350 mm
(h. 3,200 mm with automatic vacuum system)

Fluid Volume

7,500 l
(2,750 clean oil – 2,750 dirty oil – 2,000 recycle)

Filter Media

Cellulose or Silica

Filtering Area

22.5 m²

Filter Media Consumption

15 kg per workcycle

FEATURES

- Automatic workcycle
- Eco-Mode
- Automatic new oil refilling
- Automatic dirty oil inlet control kit
- Filter media loader
- Power interruptions management
- Recirculation tank automatic refilling
- Dirty oil transfer pump flowrate adjustment
- Automatic sludge conveyor
- Software for remote monitoring
- Remote monitoring optimisation and control
- Email notifications

example of application



APPLICATION SECTORS
automatic lathe machines

OUR PRODUCT RANGE

Model ►	C60	C120	C180	C270	C540	C810
Application ►	precision machining					
Machines Managed ►	#1 machine tool	#1 machine tool	up to #2 machine tools	up to #3-4 machine tools	up to #5-6 machine tools	up to #7-9 machine tools
Filtration Capacity ►	60 l/min	120 l/min	180 l/min	270 l/min	540 l/min	810 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					
Filtration Rating ►	3 µm nominal					
Dimensions ►	2,200 x 1,000 x h. 2,050 mm	2,147 x 1,336 x h. 2,141 mm	2,645 x 1,490 x h. 2,253 mm	2,570 x 2,000 x h. 2,030 mm	3,860 x 2,190 x h. 2,200 mm	4,000 x 2,460 x h. 2,500 mm
Fluid Volume ►	860 l	1,000 l	1,500 l	2,850 l	5,400 l	7,200 l
Filter Media ►	Cellulose or Silica					
Filtering Area ►	1.9 m ²	3.1 m ²	4.4 m ²	7.5 m ²	15 m ²	22.5 m ²
Filter Media Consumption per Workcycle ►	1.3 kg	2.1 kg	3 kg	5 kg	10 kg	15 kg

C0.3	C0.8	C1.5	C3.0	C4.5
automatic lathe machines				
up to #3-4 automatic lathes	up to #7-8 automatic lathes	up to #12-15 automatic lathes	up to #20-30 automatic lathes	up to #35-45 automatic lathes
180-360 l/day	400-800 l/day	750-1,500 l/day	1,500-3,000 l/day	3,000-4,500 l/day
All straight cutting oils (no emulsions)				
Steel, Alloy Steel, Precious metals, Cast iron, Iron alloys, Copper alloys, Aluminum, Plastics				
3 µm nominal				
1,600 x 1,000 x h. 2,200 mm	2,600 x 1,500 x h. 2,350 mm	2,500 x 2,000 x h. 2,350 mm	3,800 x 2,000 x h. 2,350 mm	3,800 x 2,200 x h. 2,350 mm
720 l	2,500 l	4,000 l	6,000 l	7,500 l
Cellulose or Silica				
1.9 m ²	4.4 m ²	7.5 m ²	15 m ²	22.5 m ²
1.3 kg	3 kg	5 kg	10 kg	15 kg





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