



TECHNICAL DATA ARNO SERIES

Mist collectors of oil mist, fume and micro-dust for machine tools working 24/7



THE ULTIMATE SOLUTION

For the filtration of oil mist in metalworking workshops

VISIT OUR WEB SITE
www.arfiltrazioni.com

SINCE
1995

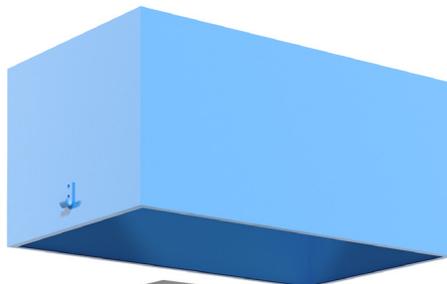
STRONG POINTS

ARNO SERIES

Over 30,000 units installed!

Powerful
Up to 4,000 m³/h

Robust, designed for high production



Member of CISQ Federation



CERTIFIED MANAGEMENT SYSTEM
ISO 9001



UNI 11304-3



100%

Units tested according to
EN: 1822
D.d.u.o.n 12772
UNI 11304-3

100%

With relevant test certificate
for each unit

80%

Recovery of re-condensed coolant,
which can be led back into the
machine tool

60%

Self-cleaning
and/or
regenerable filters

At **AR Filtrazioni** we are producers of a new generation of mist collectors for the re-condensation and purification of every type of atmospheric pollutant generated during the machining processes of machine tools (machining centers, lathes, grinders, laser and washing machines, etc.), working up to three shifts.

ADVANTAGES



- Easy and simple maintenance, once a year; high operational reliability
- Robust mechanical parts, low space requirement
- Recovery of 80% of the re-consensed oil
- Total compliance with Italian and European regulations
- Energy saving of 800.00€/year for each unit with 1,700m³/h
- Reduction of CO₂ emissions up to 9,000 kg/year, for each air cleaner
- Protection of sensitive machine tool parts
- Health-conscious and environment-friendly

AIR CLEANERS OF OIL MIST, FUME AND DUST FOR MACHINE TOOLS

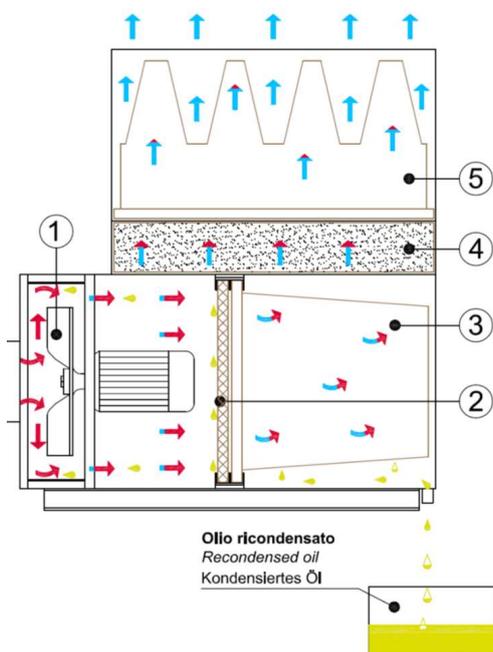
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Via dell'Industria 59/61
Bergamo BG 24126

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web@arfiltrazioni.it

www.arfiltrazioni.com
www.mistcollector.com

WORKING PRINCIPLE

The air cleaners of the ARNO series are suitable for the extraction, re-condensation and purification of oil mist, fume, micro-mist and micro-dust generated during heavy-duty production processes, up to 3 shifts.



ARNO VF

1° STAGE CENTRIFUGE

SELF-CLEANING CENTRIFUGAL CONDENSER

- Self-cleaning
- Balanced (no vibration)
- It re-condenses 80% of the oil mist, thanks to the centrifugal effect

2° STAGE METALLIC FILTER

PREFILTRATION CELL IN GALVANIZED STEEL

European standards ISO EN 16890

Filtration efficiency > 95%

Particles with volume 3 μ

- Washable (12/18 months)
- Thanks to the robust metal frame with a safety net, it can stop any potential chip
- Its sieve effect exploits gravity to convey the re-condensed oil into the drainage tube

3° STAGE POCKET FILTER

COALESCENCE FILTER

European standards ISO EN 16890

Filtration efficiency up to 95%

Particles with volume 0.4 μ

- Replacement every 6/18 months
- Glass-fibre fabric with a wide filtering surface

4° STAGE COALESCENCE FILTER

BLACK PANEL FILTER BY COALESCENCE EFFECT

- Washable
- Diffusor
- Silencer

5° STAGE HEPA FILTER

FINAL FILTRATION WITH HIGH (EPA) or VERY HIGH (HEPA) EFFICIENCY

European standards EN1822

Filtration efficiency up to 99.95%

Particles with volume $\geq 0.15/0.3\mu$

- Replacement every 24/36 months

Thanks to its **modularity**, every air cleaner can be equipped with interchangeable filters of different filtration efficiency, suitable to capture particles of different sizes.

In case of particularly heavy work situations, in the presence of solid dust and cast iron metalworking, the unit is predisposed for the application of a specific pre-filtration system.

In case of oil mist, fume and odours, VOC or formadehyde, the air cleaners can be equipped with an **active carbon cell**.

OPTIONAL

PRE-FILTER

3 SHIFTS

HORIZONTAL MACHINING CENTERS

HIGH PRESSURE PUMPS

WORKING PRINCIPLE ARNO VF + PRF K

X STAGE PRE-FILTRATION SYSTEM

- Pre-filtration chamber
- Washable

1° STAGE CENTRIFUGE

SELF-CLEANING CENTRIFUGAL CONDENSER

- Self-cleaning
- Balanced (no vibration)
- It re-condenses 80% of the oil mist, thanks to the centrifugal effect

2° STAGE METAL FILTER

PREFILTRATION CELL IN GALVANIZED STEEL

European standards ISO EN 16890
Filtration efficiency > 95%
Particles with volume 3 µ

- Washable (12/18 months)
- Thanks to the robust metal frame with a safety net, it can stop any potential chip
- Its sieve effect exploits gravity to convey the re-condensed oil into the drainage tube

3° STAGE POCKET FILTER

COALESCENCE FILTER

European standards ISO EN 16890
Filtration efficiency up to 95%
Particles with volume 0.4 µ

- Replacement every 6/18 months
- Glass-fibre fabric with a wide filtering surface

4° STAGE COALESCENCE FILTER

BLACK PANEL FILTER BY COALESCENCE EFFECT

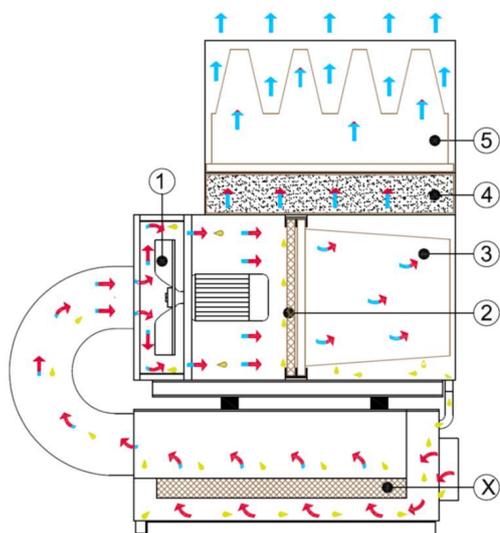
- Washable
- Diffusor
- Silencer

5° STAGE HEPA FILTER

FINAL FILTRATION WITH HIGH (EPA) OR VERY HIGH (HEPA) EFFICIENCY

European standards EN1822
Filtration efficiency up to 99.95%
Particles with volume $\geq 0.15/0.3\mu$

- Replacement every 24/36 months



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TECHNICAL DATA AIR FLOW AND POWER

EACH UNIT IS EQUIPPED WITH:

- Low consumption motor **IE2 / IE3** class (ULCSA on request)
- **ABB / SIEMENS** overload cutout switch (ULCSA on request)
- Filter clogging detector; analogue/digital pressure gauge
- Drainage hose for the recovery of re-condensed coolant (about 80%, if neat oil)
- Up to **HEPA** final filter, with very high filtration efficiency



ARNO 0

850 / 1250 m³/h
500 / 750 CFM

ARNO 1

1500 / 1700 m³/h
880 / 1000CFM

ARNO 2

2600 / 3300 m³/h
1540 / 1940 CFM

ARNO 3

3700 / 4000 m³/h
2180 / 2360 CFM

TECHNICAL DATA

MODEL	SUCTION INLET Ømm	MAX. AIRFLOW m ³ /h - CFM	POWER kW	TENSION FREQUENCY V Hz	NOISE dBa	WEIGHT Kg/Lbs
0VA - 0VFA	100/120/150	850/1000/1250	0,55	230/400 50	67	50/110
1V - 1VA - 1VF - 1VFA	150	1700	0,75	230/400 50	68	70/154
1C - 1CF	150	1500	0,75	230/400 50	67	70/154
2V - 2VA - 2VF - 2VFA	150/200	2700/3300	1,5	230/400 50	72	95/209
2C - 2CF	150	2600	1,5	230/400 50	70	95/209
3V - 3VA - 3VF - 3VFA	200	4000	2,2	230/400 50	72	105/232
3C - 3CF	200	3700	2,2	230/400 50	72	105/232
PRF K0	100/120/150					35/72
PRF K1	150					45/96
PRF K23	150/200					50/110

Air flow capacity may vary based on filters type and combination.

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TECHNICAL DATA



BASIC SERIES

Neat oil	ARNO C
Neat oil / Emulsified oil	ARNO VA
Emulsified oil	ARNO V



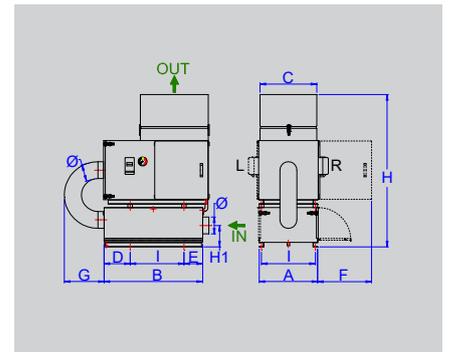
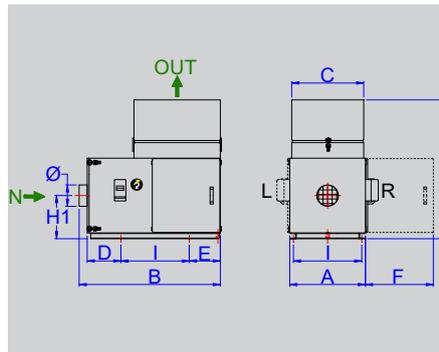
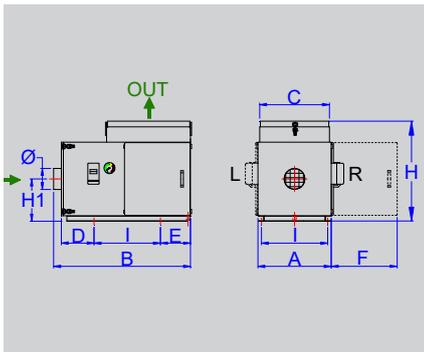
PLUS SERIES

Neat oil	ARNO CF
Neat oil / Emulsified oil	ARNO VF A
Emulsified oil	ARNO VF



PLUS SERIES with prefilter

Neat oil	ARNO CF + PRF K
Neat oil / Emulsified oil	ARNO VF A + PRF K
Emulsified oil	ARNO VF + PRF K



MODEL ARNO	A	B	C	D	E	F	G	H	H1	I
	0VA	360	750	360	185	205	380	-	507	230
0VFA	360	750	360	185	205	380	-	780	230	310-Ø9
1V - 1VA - 1C	400	860	400	230	220	420	-	570	245	360-Ø9
1VF - 1VFA - 1CF	400	860	400	230	220	420	-	860	245	360-Ø9
1VF - 1VFA - 1CF + PRF K1	450	840	400	240	240	400	320	1240	260	360-Ø9
2V - 2VA - 2C	525	990	500	245	220	500	-	690	305	475-Ø9
2VF - 2VFA - 2CF	525	990	500	245	220	500	-	980	305	475-Ø9
2VF - 2VFA - 2CF + PRF K23	570	955	500	235	245	480	320	1400	274	475-Ø9
3V - 3VA - 3C	525	990	600	245	220	500	-	690	305	475-Ø9
3VF - 3VFA - 3CF	525	990	600	245	220	500	-	980	305	475-Ø9
3VF - 3VFA - 3CF + PRF K23	570	955	600	235	245	480	320	1400	274	475-Ø9

AR Filtrazioni reserves the right to make any change necessary to improve its products, at any moment and without notice.
The technical data of this data sheet are not binding.

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OPTIONAL



DOUBLE STAGE OF ABSOLUTE FILTRATION

For a long-lasting absolute filtration with sieve effect.



DIGITAL FILTER CLOGGING CONTROL DEVICE

As an alternative to the analog pressure gauge, our digital pressure gauge sends a signal to the machine tool, alerting you to do maintenance.



HARTING PLUG

It connects the mist collector directly to the PLC of your machine tool.



ACTIVATED CARBON CELL

It eliminates odours, fume, VOCs and formaldehyde.

SELF-ADJUSTING CONTROL OF THE REQUIRED AIR FLOW RATE, THROUGH INVERTER

Innovative and technological, for an even more efficient system of filtration.

AR FILTRAZIONI Technology



ARTICULATED SUCTION ARM AND TROLLEY

The flexible and portable extraction unit for all manual deburring and welding, and occasional operations.



STAINLESS STEEL

Even more robust! Designed for applications on industrial washing machines.

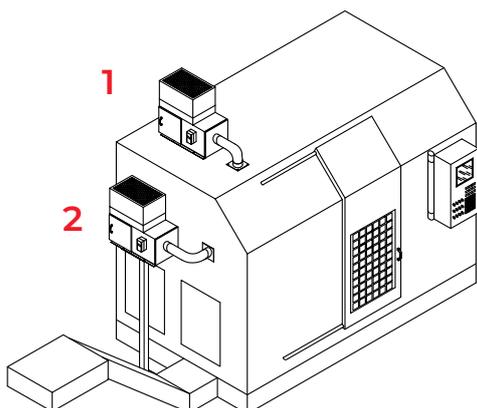
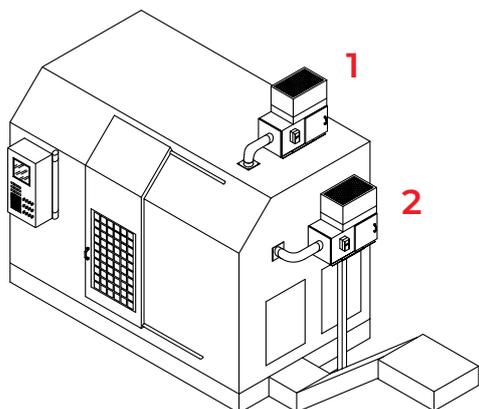
R&D OFFICE

In addition, AR Filtrazioni stands for constant research. The R&D office is daily engaged in the research and development of innovative technical solutions for the purification of oil mists, fumes and micro-dusts generated during the machining processes of machine tools.

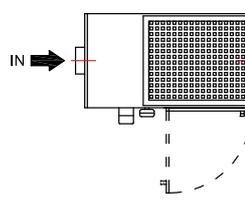
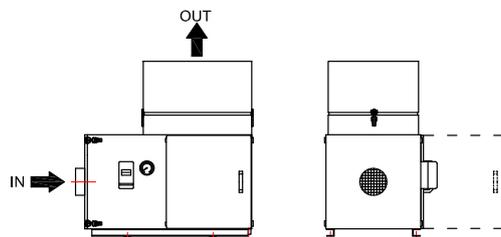
All series of mist collectors and accessories have a "Made in Italy" certificate.

INSTALLATION

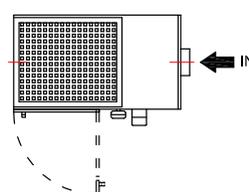
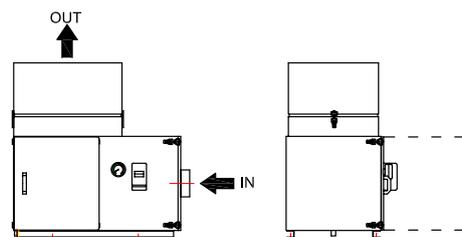
At **AR Filtrazioni** we always offer turn-key solutions, installing the filters at the customer's premises thanks to our specialized personnel. Otherwise, we leave complete autonomy to the customer: each system comes complete with an installation kit and an instruction manual, which make the installation of our filter units incredibly intuitive all over the world.



RIGHT VERSION



LEFT VERSION



ON TOP OF THE MACHINE
WITH AD HOC SUPPORT



ON PLANT
FASTENED TO THE FLOOR



ON TROLLEY



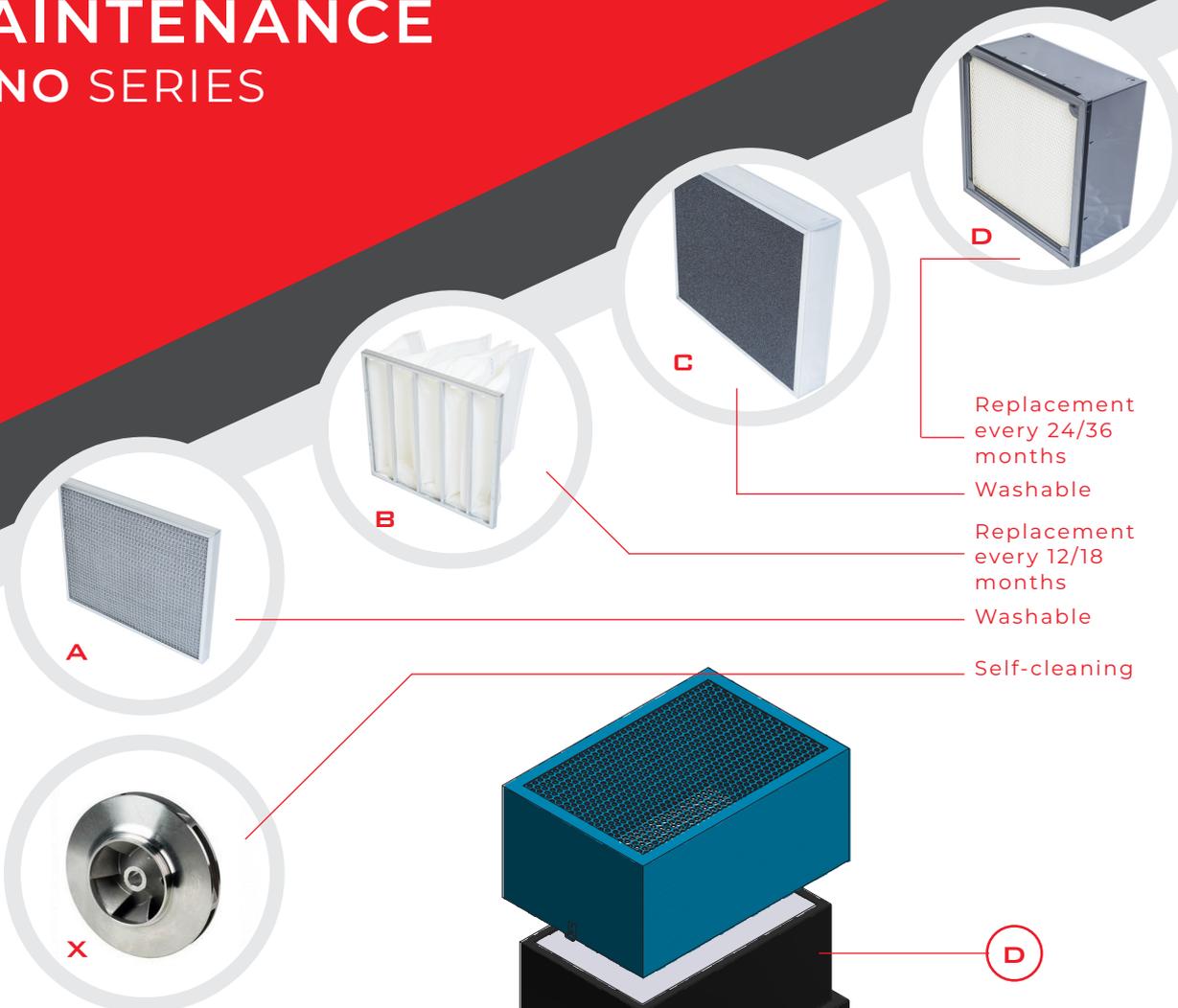
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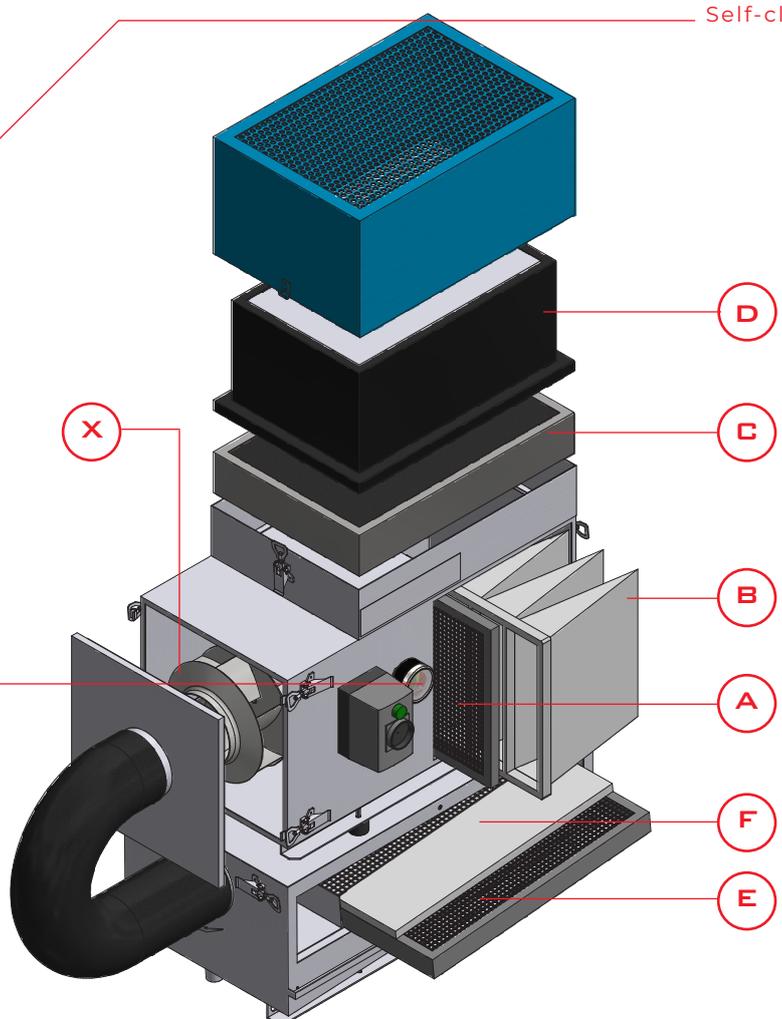
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MAINTENANCE ARNO SERIES



REPLACE / CLEAN SPARE FILTERS
when the red LED turns on



This **maintenance program** shows average times, resulting from statistics elaborated on the basis of the thousands of systems that **AR Filtrazioni** maintains annually.

REGULATIONS



EN 1822 - ISO 29463

UNI 11304-3

D.d.u.o. n.12772

- **UNI 11304-3:** Filtration units for oil mist, to be treated with a machine-mounted filter for the re-introduction of the air inside of the workplace
- European Standards **ISO EN 16890** (ex EN779) with a filtration efficiency of $\geq 95\%$ - Particles with volume $\geq 0.4 \mu$
- Final filtration stage according to **EN1822** and Italian standards, with High (EPA) or Very High (HEPA) filtration efficiency up to 99.95% of particles with $0.15 / 0.3 \mu$ volume (micro-mists, micro-dusts, fume)
- Device to monitor filter conditions
- Overload cutout switch (in accordance with CE standards)
- Test certificate for each unit

HEPA Filter EN 1822

Very high efficiency filter

Filtration efficiency up to 99.95% of particles with volume $\geq 0.15/0.3\mu$ (micro-particles)



99.95%

REFERRING TO THE ITALIAN EFFECTIVE RULES:



The **ARNO "Plus"** series complies with the **Technical Annex n.32** of 10 January 2012 - **D.d.u.o. n.12772 of 23/12/11** referring to extracted and filtered emissions by on-board filter with clean air returned to the workshop, through the top of the unit.

FILTER UNIT TEST BY *Studio Ambiente S.N.C*

MIST COLLECTOR'S OUTPUT ON AUTOMATIC LATHE 6/32

Parameter	Determined values (mg/m ³)	Reference levels (TLV/TWA) (mg/m ³)
Mineral oil / oil mist	0,04	5

Room temperature 18.5 °C (65.3 °F)

Specific sampling to evaluate the efficiency of the suction and filter system after periodical maintenance with filter replacement (ARNO 2CF filter unit no. 13 serial no. 04607/2007 with new ABSOLUTE HEPA filter) placed to control an automatic lathe for machining the bar in AVP with neat oil coolant.

VALUE

Forty-year-long
know-how

Free consultancy

Free of charge, technical
inspection and analysis

Sales and Assistance with
non-binding quotation

After-sales
Assistance

Installation

24 months warranty

Maintenance contract

PLUS

- **Filters and spare parts supply time:** always in stock and ready for delivery
- **Environmental and technical consultancy:** free of charge, both during the order phase and throughout the life of the plant
- **Delivery time:** 2 to 4 weeks
- **State-of-the-art technology** is not enough for AR FILTRAZIONI: the service capability and the proximity to our customers guarantee an optimal and technically sophisticated solution, even for special customer needs.
- **Test:** Do you have an important investment to make? Put one of our systems to the test! We offer a money back guarantee

- **Design, study and realization of *ad hoc* industrial filtration systems with an on-the-spot investigation and data collection of the various machine tools and study of the most suitable system for your needs.**
- **Outsourcing maintenance. We carry it out and we are responsible! We release a maintenance certificate with legal value for each one of our units.**
- **Do you use non-original spare parts for your mist collectors? Do not lose the guarantee on the air cleaner and the filtering efficiency. Contact us and find out how to save money.**



REFERENCES

Some customers who chose AR Filtrazioni mist collectors



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