



TECHNICAL DATA HYDROFILTER

The Hydrofilter series is suitable for the safe suction of hazardous, flammable and potentially explosive materials, such as magnesium dust.



THE ULTIMATE SOLUTION

For the extraction and reduction of airborne dry dust from hazardous materials

VISIT OUR WEB SITE
www.arfiltrazioni.com

SINCE
1995

STRONG POINTS

HYDROFILTER



UNI 11304-3



100%

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

100%

With relevant test certificate for each unit

100%

Maximum safety guaranteed

100%

Suitable for magnesium, aluminium, titanium powders

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
- Robust mechanical parts, high operational reliability
- Recovery of 80% of the re-condensed oil
- Total compliance with Italian and European regulations
- Energy saving
- Reduction of CO₂ emissions
- Protection of sensitive machine tool parts
- Health-conscious and environment-friendly

MIST COLLECTORS OF OIL MIST, FUME AND DUST FOR MACHINE TOOLS

AR FILTRAZIONI S.R.L.
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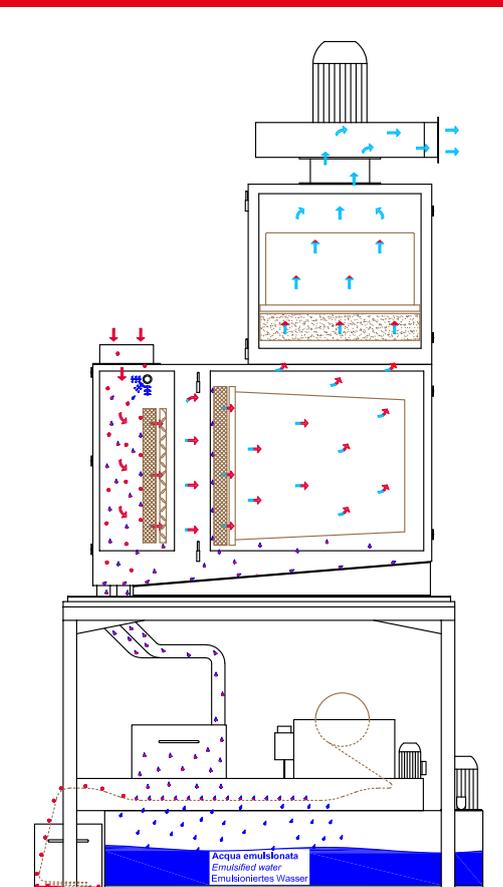
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WORKING PRINCIPLE

The HYDROFILTER Series, suitable for the suction and purification of fume, dust and odour produced during wet and dry machining processes, is suitable for the filtration of different sizes of particles, by simply using interchangeable filters with different degrees of filtration efficiency.

A pre-filtration chamber for power washing with a miniscrubber, is the first stage of fire prevention; it guarantees a highly safe working environment during the metal working processes, which can potentially generate inflammable and/or explosive powders (aluminium, magnesium, titanium).

The series is equipped with a class IE3 motor with low energy consumption, an electrical control panel and a visual filter clogging detector. The series can be equipped with liquid filtering tanks, with appropriate safety systems.



HYDROFILTER

X° MINI-SCRUBBER

CLOSED-CIRCUIT H₂O CASCADE WITH LIQUID FILTER FOR THE DEMOLITION OF DANGEROUS DUST

1°STAGE METALLIC FILTER

PREFILTRATION CELL IN GALVANIZED STEEL / ALUMINIUM

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

2°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

3°STAGE COALESCENCE FILTER

BLACK PANEL FILTER BY COALESCENCE EFFECT

- Washable
- Diffusor
- Silencer

4°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 ≥ 0.15 / 0.3 μ

- Replacement every 24/36 months

HYDRODESK

WORKBENCH

MANUAL DRY DEBURRING

HAZARDOUS DUST REDUCTION

The Hydrodesk is a special suction workbench, where the operator can carry out manual dry deburring.

The bench is equipped with a recirculating H₂O circuit to prevent sparks and dangerous dusts, which are neutralised and filtered by the Hydrofilter mist collector.

WORKING PRINCIPLE

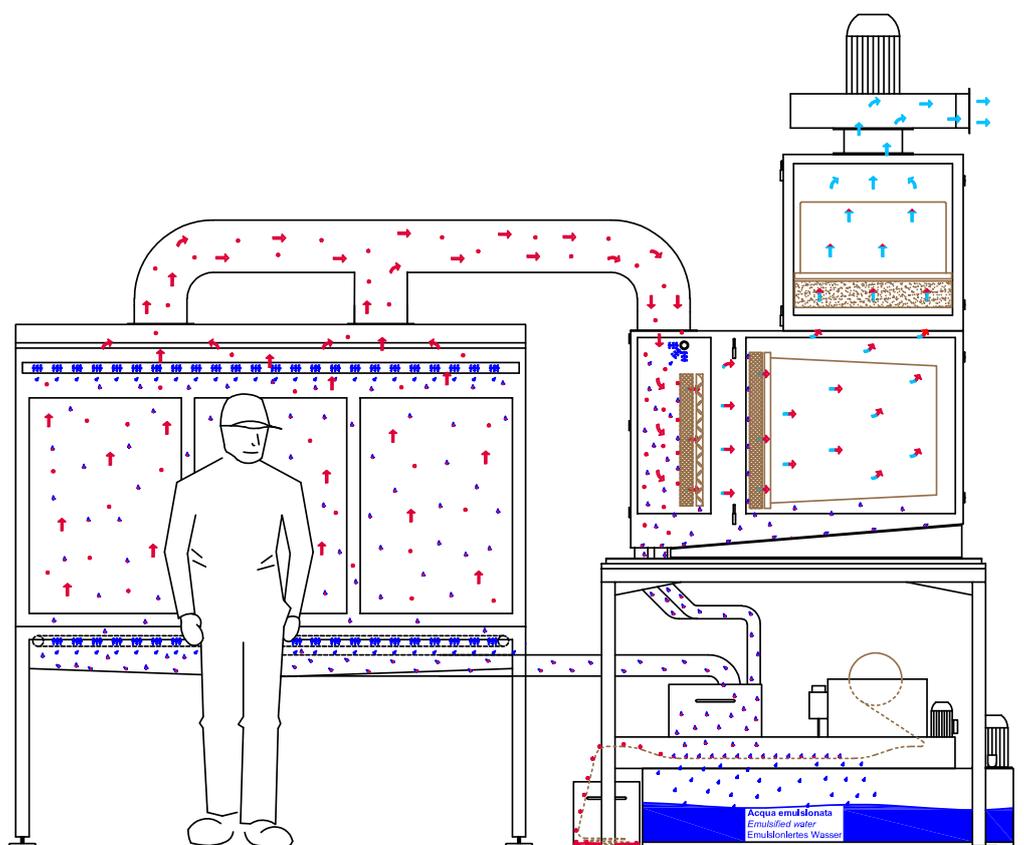
HYDRODESK

+

HYDROFILTER

FIRE PREVENTION:
THE WATER MESH WALL NEUTRALISES
POSSIBLE SPARKS AND ELIMINATES
POTENTIALLY EXPLOSIVE AIRBORNE
DUST

X° MINI-SCRUBBER
1° METALLIC FILTER
2° POCKET FILTER
3° COALESCENCE FILTER
4° EPA / HEPA FILTER



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TECHNICAL DATA

EACH UNIT IS EQUIPPED WITH

- Low consumption motor **IE3** class (ULCSA on request)
- **ABB / SIEMENS** (ULCSA on request) overload cutout switch model S
- Electrical control panel (ULCSA on request) models M / L
- Electronic filter clogging detector
- Up to **HEPA H13** final filter with very high filtration efficiency
- Closed circuit liquid filter



HYDROFILTER S
up to 2800 m³/h

HYDROFILTER M2
up to 2000 m³/h

HYDROFILTER M3
up to 3000 m³/h

HYDROFILTER L4
up to 4000 m³/h

HYDROFILTER L6
up to 6000 m³/h



SUITABILITY FOR POLLUTANT

- REDUCTION AND COLLECTION OF HAZARDOUS AND POTENTIALLY EXPLOSIVE DUSTS

MODEL	SUCTION INLET Ømm	MAX. AIRFLOW m ³ /h	HEAD mm/H ₂ O	POWER kW	TENSION FREQUENCY V Hz	NOISE dBa	WEIGHT Kg
HYDROFILTER S	100/150	2800	210	1,5	230/400 50	75	170
HYDROFILTER M2	200	2000	200	1,5	230/400 50	72	215
HYDROFILTER M3	250	3000	230	3	230/400 50	76	235
HYDROFILTER L4	250/300	4000	290	4	230/400 50	78 *	340
HYDROFILTER L6	250/300	6000	130	4	230/400 50	80 *	370

* with noise attenuator

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

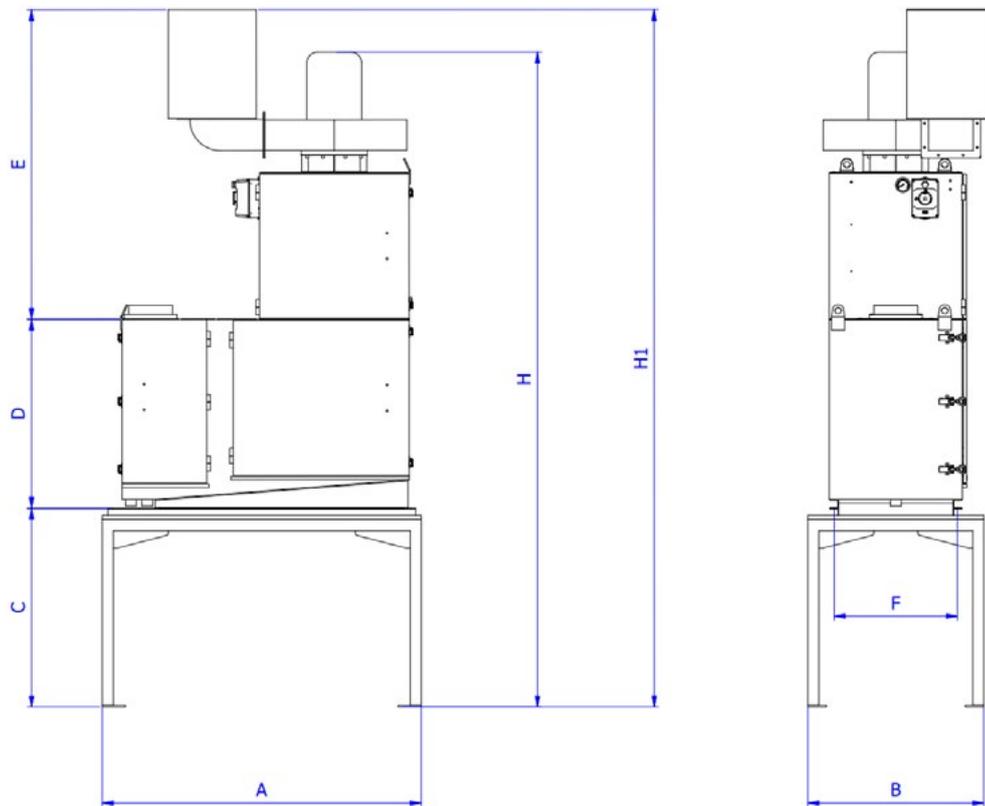
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TECHNICAL DATA



MODEL	A	B	C	D	E	F	H	H1
	mm	mm	mm	mm	mm	mm	mm	mm
HYDROFILTER M2	1450	1030	1100	865	1385	560	3100	3350
HYDROFILTER M3	1450	1030	1100	865	1420	560	3200	3400
HYDROFILTER L4	1450	1100	1000	865	1420	960	3100	3300
HYDROFILTER L6	1450	1100	1000	865	1620	960	3200	3500

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.

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.

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OPTIONAL:

HYDRODESK WORKBENCH

Fire prevention:
The water mesh wall neutralises possible sparks and eliminates potentially explosive airborne dust



LIQUID PURIFIER

Functional to the closed water circuit



SILENCER WITH OGIVE

To reduce noise



ADDITIONAL MINI-SCRUBBER



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

AR FILTRAZIONI Technology



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OPTIONAL:

SAFETY FOR HAZARDOUS MATERIALS

For the extraction and reduction of airborne dry dust from hazardous materials



ACTIVATED CARBON CELL

It eliminates odours, fume, VOCs and formaldehyde.

40 Kg active carbon



STAINLESS STEEL

Even more robust! Designed for applications on industrial washing machines



DIGITAL FILTER CLOGGING CONTROL DEVICE

Our digital pressure gauge sends a signal to the machine tool, alerting you to do maintenance.



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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, since each system comes complete with an installation kit and an instruction manual, which make the installation of our filter units all over the world incredibly intuitive.



HYDROFILTER AND HYDRODESK FOR MANUAL DRY DEBURRING OF MAGNESIUM



HYDROFILTER FOR CNC PLASMA CUTTING

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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 up to H13 EN 1822

Very high efficiency filter

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



REFERRING TO THE ITALIAN EFFECTIVE RULES:



The **HYDROFILTER** 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 filter HEPA) placed to control an automatic lathe for machining the bar in AVP with neat oil coolant.

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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 date of filtration units:** 4 to 6 weeks

- **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.**
- **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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Member of CISQ Federation



CERTIFIED MANAGEMENT SYSTEM
ISO 9001



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