
General Catalogue



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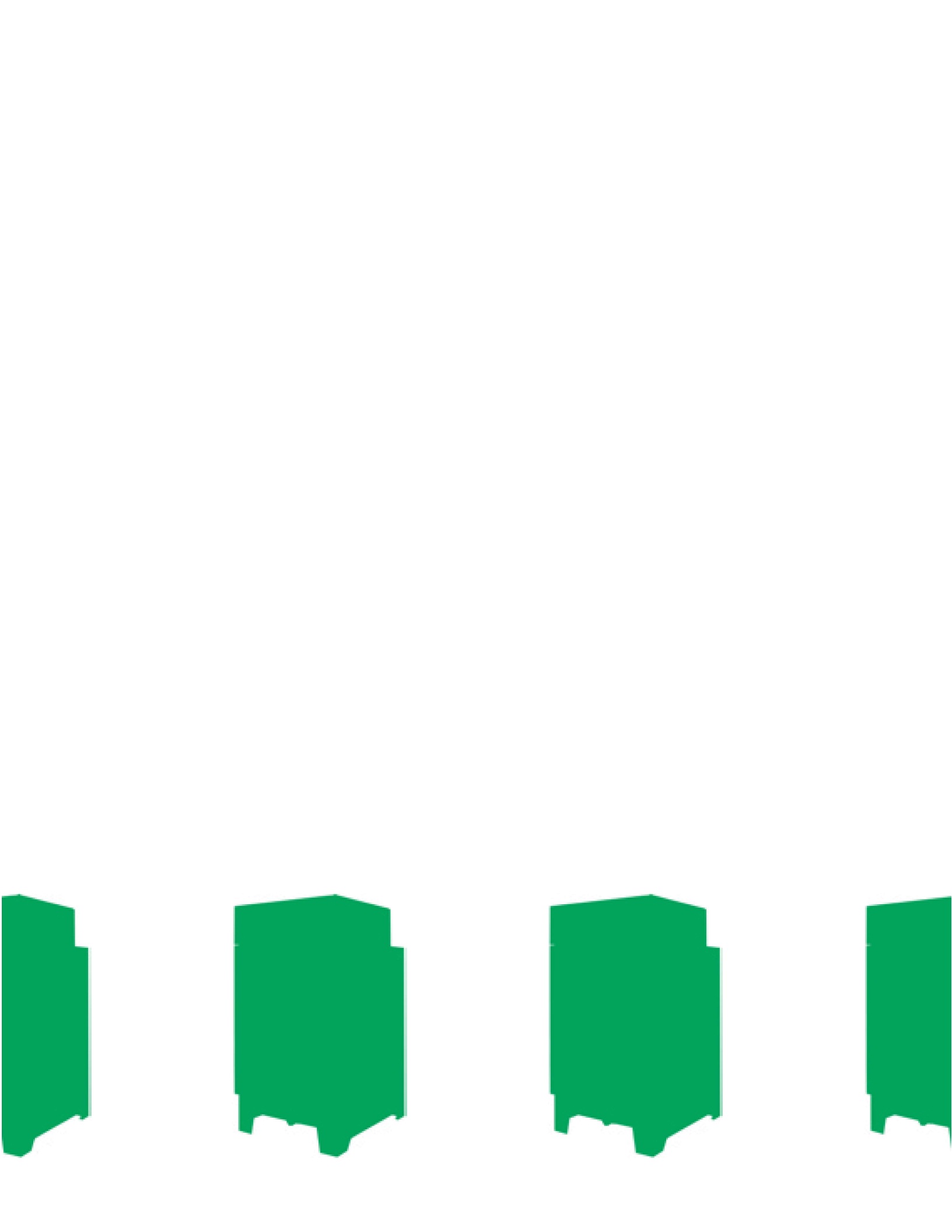
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Air Filtration



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ARGOS PRO

Air Filtration

Cartridge filtration unit



Argos Pro

The Argos Pro series is specially designed for the filtration of oil mists (emulsion like neat oil), vapours and fumes emitted by various mechanical processes.

The filter module is a unit specifically designed for the industrial sector, where robustness, reliability and simplicity of operation and maintenance are essential features.

Argos Pro is available in 3 sizes, with flow rates from 3,000 to 15,000 m³/h and with different combinations of increasing filtration efficiency, up to an efficiency of 99.95%.

Losma guarantees that each filter unit is individually tested through rigorous control procedures.

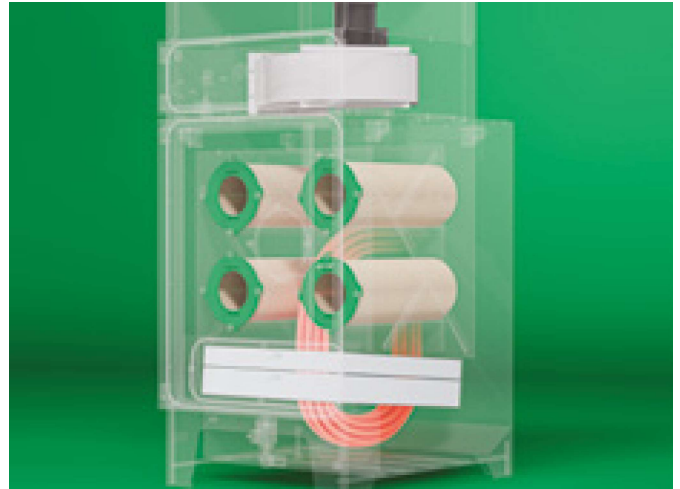
A quality and functional test certificate is issued for each unit.





Operation

- The air inlet area, which connects the hoses to the filter, consists of a large section which acts as a stilling chamber.
- The air then passes through two separate, fully regenerable filter sections, a PVC labyrinth droplet separator and a G2 metal filter, with 80-90% efficiency in accordance with ISO 16890 – ISO COARSE 30%.
- The next area is the chamber housing the filter elements, pleated cartridges with a high filtering surface area that retain the finest impurities. The cartridges are lined with a highly absorbent coalescing filter that also facilitates homogeneous diffusion of the air flow over the entire cartridge section. This filter has an F5 filtration efficiency of 40-60%, while the cartridges have an F9 filtration efficiency of 95%.





Left: example sequence taken from product operation video

Advantages

VERSATILITY AND MODULARITY

The use of increasingly efficient filters and the possibility of using pre and post filtration systems allows for the use of Argos Pro in all modern mechanical processes, from the simplest to the most demanding. The different construction models also make it easier to choose a solution that is always adequate for your needs without wasting energy on oversized systems or, on the contrary, inefficient on inadequately sized systems. For flow rates above 15,000 m³/h, modular filtration solutions can be created and customised centralised systems can be designed.

FAST AND EASY MAINTENANCE

Access to the filter section is truly simple and straightforward. Simply open the lockable hinged door for easy access to the filters. These can be removed very easily and replaced quickly. The inner door and the new sloping tank allow for cleaner and more effective maintenance.

IDEAL FOR LARGE CENTRALISED SYSTEMS

The use of high-efficiency centrifugal fans and the large flow rates generated make the Argos Pro series great for use for the extraction and filtration of large machine tools and centralised systems.

1. High drawer
2. Low drawer
3. Cartridge filters
4. Fan

1.



2.



3.



4.



Optional

1. H13 ABSOLUTE FILTER

Can obtain a very high level of filtration, 99.95% according to EN 1822. Especially suitable in the presence of micro-mists and fumes. The filter has an easy connection-uncoupling system for effective maintenance.

2. CLOGGING INDICATOR

H13 Absolute filter clogging indicator light.

3. LED UP SYSTEM

A system that combines a digital pressure switch and LED strip in 3 different colours (green, yellow and red) and allows easy and quick display of the clogging status of the filter elements.

4. TRANSFER PUMP

Pump including float for automatic emptying of the drip tray.

5. TWISTER

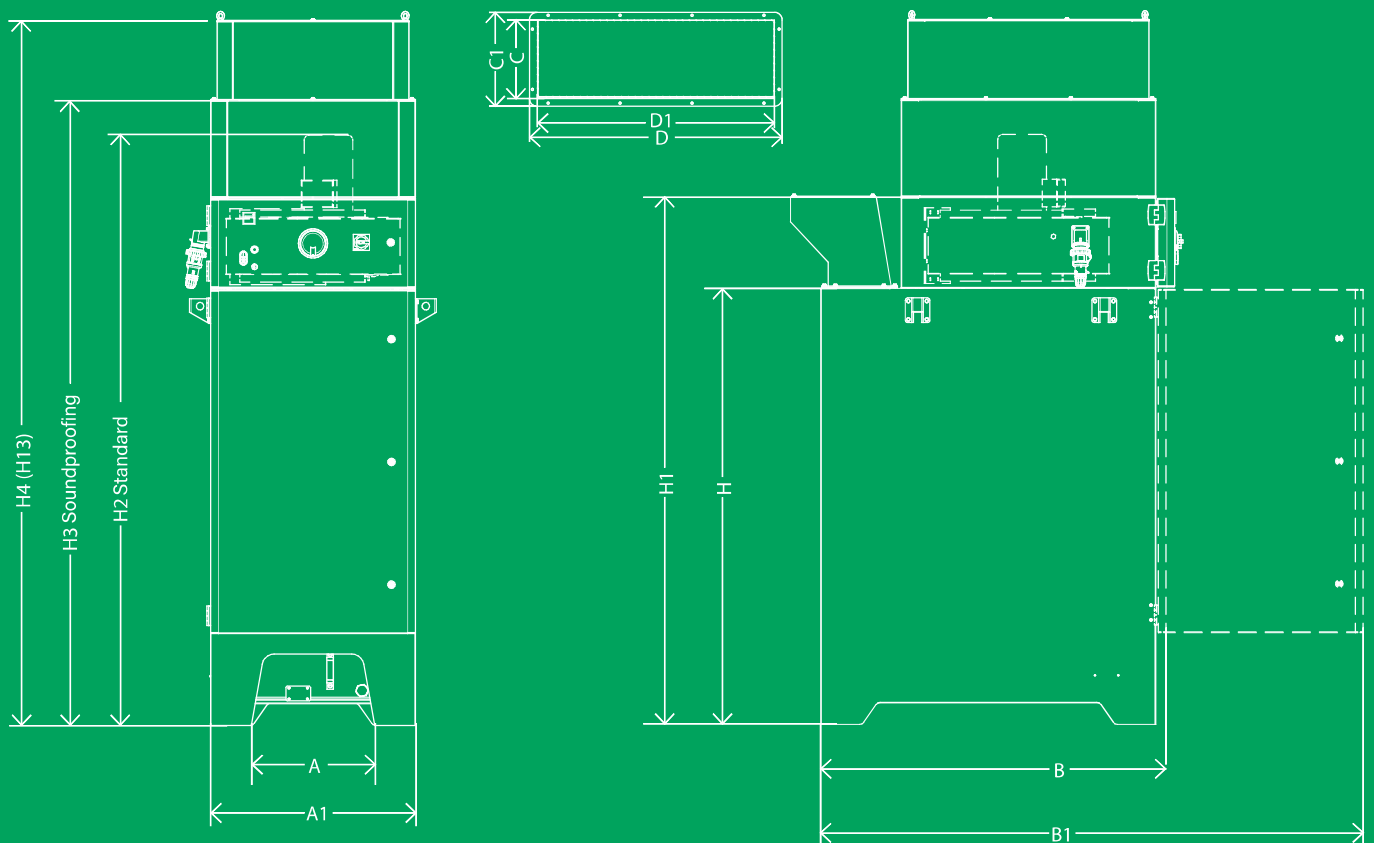
Helical system that imparts a strong centrifugal motion to the air, facilitating the re-aggregation of micro oil particles.

6. INVERTER WITH TRANSDUCER

Motor frequency controller for optimising the air flow rate resulting in energy savings.



Technical Data

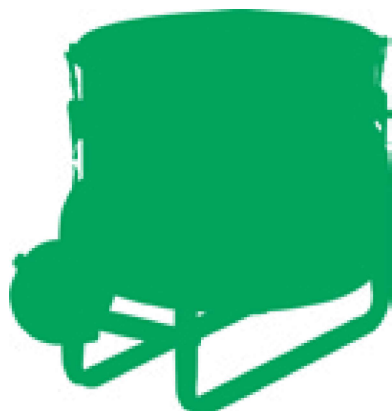
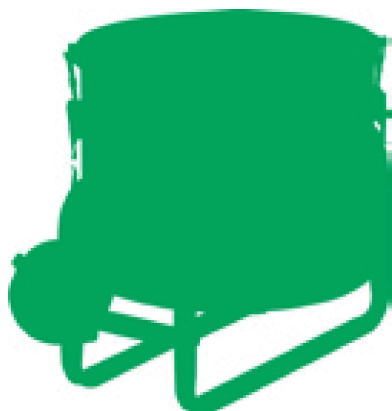


Size	Models	Dimensions (mm)													Weight with H13 (kg)
		A	B	C	D	H	H1	H2	H3	H4	A1	B1	C1	D1	
SMALL	Argos Pro 3000	834	1441	249	754	1777	2150	2348	2550	2870	1010	2210	329	834	620
	Argos Pro 4500	834	1441	249	754	1777	2150	2410	2550	2870	1010	2210	329	834	660
MEDIUM	Argos Pro 6000	1104	1441	249	1024	1777	2150	2414	2550	2870	1280	2480	329	1104	800
	Argos Pro 8000	1104	1441	249	1024	1777	2150	2500	2550	2870	1280	2480	329	1104	835
LARGE	Argos Pro 9000 *	1404	1491	299	1324	2128	2630	2853	3320	3650	1580	2830	379	1404	1000
	Argos Pro 12000 *	1404	1491	299	1324	2128	2630	3000	3320	3650	1580	2830	379	1404	1050
	Argos Pro 15000 *	1404	1491	299	1324	2128	2630	3060	3320	3650	1580	2830	379	1404	1100

Size	Models	Maximum air flow (m³/h)	Power (kW)		Cartridges	Noise level 50 Hz (dBa) **	RPM (rpm)		Tank Capacity (l)
			50 Hz	60 Hz			50 Hz	60 Hz	
SMALL	Argos Pro 3000	3000	1,5	1,8	2	<75	2840	3410	57
	Argos Pro 4500	4500	3	3,6	3	<75	2900	3480	57
MEDIUM	Argos Pro 6000	6000	4	4,8	4	<75	2910	3490	76
	Argos Pro 8000	8000	5,5	6,6	5	<75	2980	3470	76
LARGE	Argos Pro 9000 *	9000	7,5	9	6	<80	2980	3470	97
	Argos Pro 12000 *	12000	11	13,2	8	<80	2930	3520	97
	Argos Pro 15000 *	15000	15	18	9	<80	2940	3520	97

* With external electrical panel.

** With soundproof box and HEPA H13 absolute filter.



Darwin

Air Filtration

Centrifugal Fan Unit
for mists and fumes



Darwin

The Darwin series is a line of centrifugal filters for the purification of air containing oily mists, micro-mists and fumes resulting from the use of coolants (emulsion or neat oil).

It can be used on all types of machine tools and for all removal operations.

It is available in 4 sizes with 3 different fully interchangeable filtration technologies. Available flow rates range from 600 to 3,000 m³/h, with various combinations of increasing filtration efficiency, up to an efficiency of 99.97%.

Patented in the USA and Europe (Italy, France, Germany, Great Britain, Luxembourg, Switzerland, Sweden, Spain).

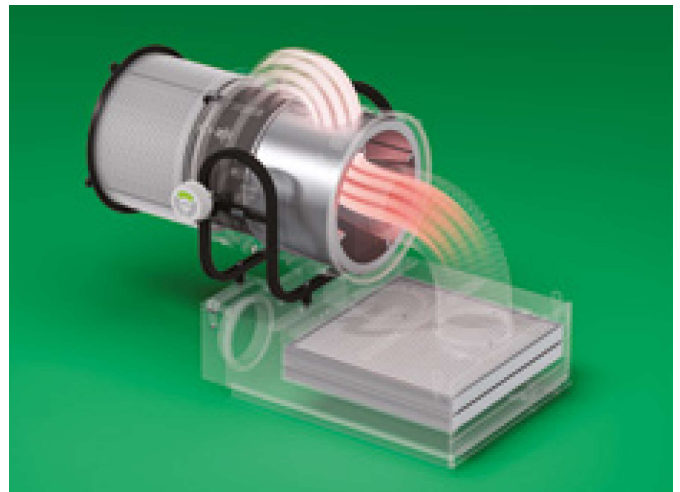
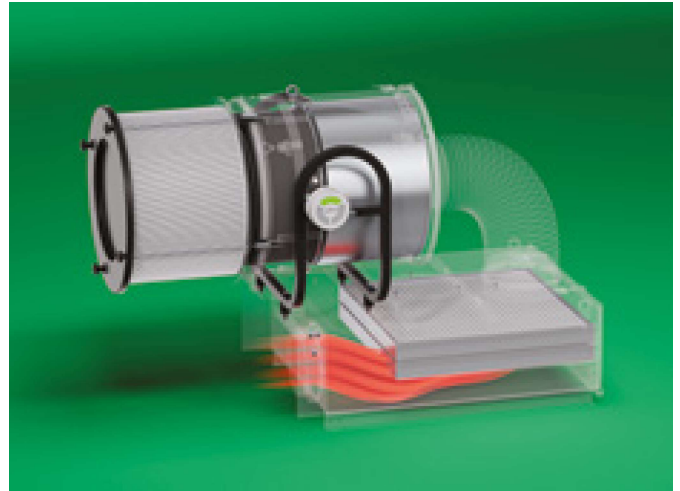
Losma guarantees that each filter unit is individually tested through rigorous control procedures. A quality and functional test certificate is issued for each unit.





Operation

- The polluted air is filtered thanks to the depression generated by the rotation of the centrifuge, which imparts a strong swirling movement to the air.
- This passes through special polyurethane foam sponges housed inside the centrifuge (only in the single and double versions) and then through a perforated mesh. The combination of all these elements facilitates the re-aggregation of even the finest oil mist particles.
- Finally, the air passes through a further static filtration stage before being returned to the working environment.
- The recondensed liquid is easily and efficiently discharged out of the filter unit by means of a drainage pipe with continuous overpressure.



Right: example sequence taken from product operation video



FILTRATION TECHNOLOGIES

Darwin is available in 3 versions: turbine, single centrifuge and double centrifuge.

TURBINE

Suitable for all surface grinding operations (grinding, sharpening, honing, lapping and all similar finishing operations) even with small amounts of solid particles.

SINGLE CENTRIFUGE

Suitable for all removal operations (emulsion as whole oil).

DOUBLE CENTRIFUGE

Suitable for all machining operations (emulsion as whole oil), especially for harsh working conditions such as, for example, the use of high pressure that generates micro-mists and vapours.



Advantages

DUAL FILTRATION SYSTEM

The Darwin series uses a dual combination of filtration: dynamic (given by the rotation of the centrifuge) and static (with the integrated post-filtration system) to guarantee high performance.

VERSATILITY AND MODULARITY

The unique Darwin series offers 12 different possible combinations of filtration technology and relative suction power, making it easy to choose a solution that always fits your needs without wasting energy on oversized systems or, on the contrary, inefficient on inadequately sized systems.

STAINLESS STEEL VERSION

All models in the Darwin series can be supplied in satin-finished stainless steel for use in those applications where normal painted sheet metal is not suitable.

CONDENSATION AND DRAINAGE

Unlike common static filter systems, the Darwin series guarantees unparalleled recondensation and drainage capacity. In fact, it uses the overpressure generated inside the filter unit to continuously discharge the liquid, which can then be recovered and reused.





Optional

1. Guard pre-filter

2. Clipper post-filter

3. X-VIEW

1. Guard pre-filter

Pre-filter for chips and dust, equipped with metal and synthetic filter stages. Useful for maximising filtration efficiency at high outputs of oil mist mixed with metal chips and dust.



2. Clipper post-filter

Available with filtration F9 at 95 % or H13 at 99.95 % in accordance with EN 1822. Especially suitable in the presence of micro-mists or fumes.



3. X-VIEW

Filter clogging sensor

The X-VIEW Sensor is able to detect the progressive clogging state of the Darwin filters, signalling three main operating phases:

- GREEN: Clean Filters;
- YELLOW: Pre clogging;
- RED: Clogging.

Thanks to an integrated TIMER, the X-VIEW sensor allows to know when 15,000 working hours (i.e. 5 years/8 hours per day) have been achieved, which is the recommended threshold for changing the filter set. The X-VIEW sensor can be positioned on Darwin or in any other part of the machine tool where the operator is more comfortable reading the data.



X-View also displays:

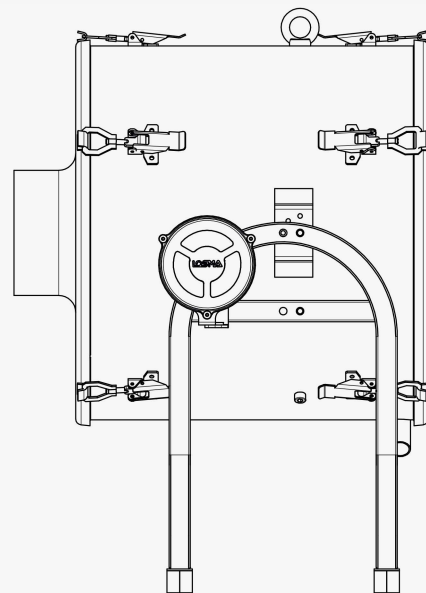
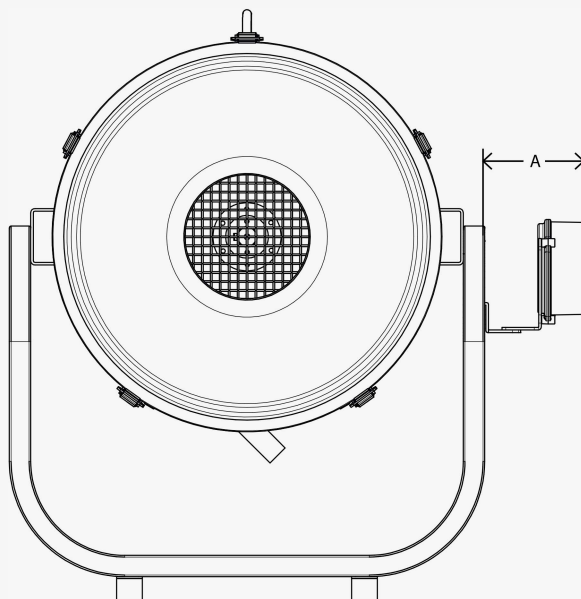
- possible upstream obstructions: whether by chip or liquid build-up. X-View is capable of detecting instantaneous or progressive clogging in the inlet pipe or suction grid of the machine tool cabin;
- zero flow alarm. For example, when Darwin is switched off or when the motor is not running or a pipe is disconnected;
- the timer indicates the achievement of 15,000 working hours - the threshold recommended for checking the filters.

Technical data

Voltage: 24V DC

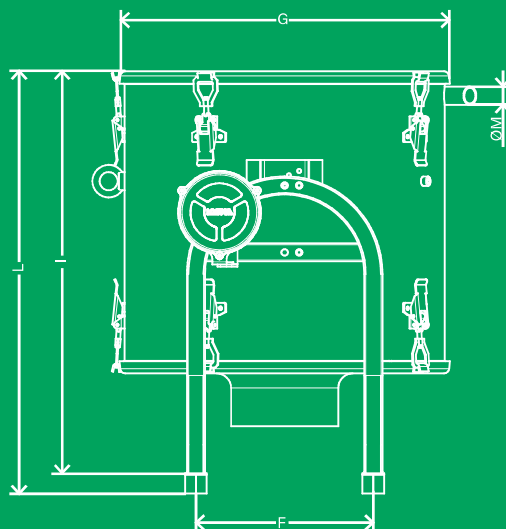
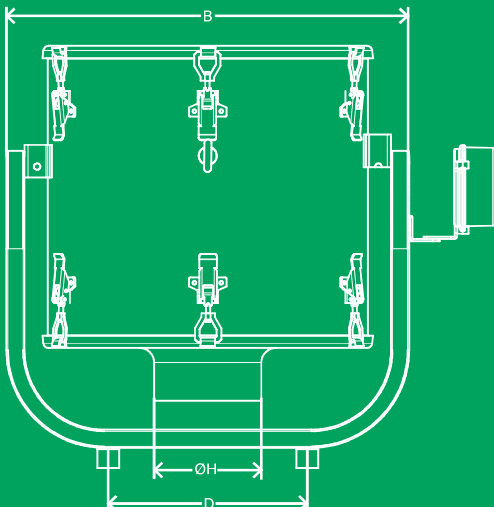
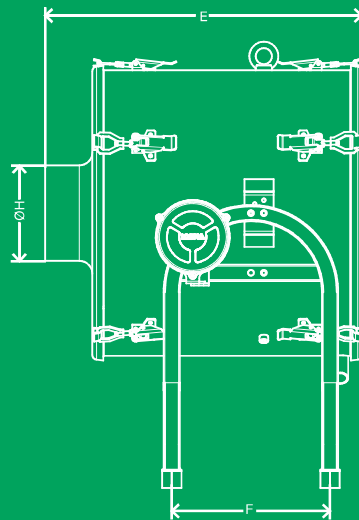
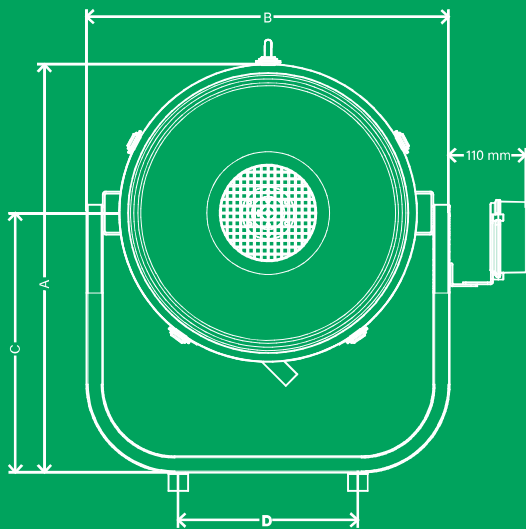
Signal type: LED display

Size: A=110mm Ø=115mm





Technical Data



1. Darwin



Darwin

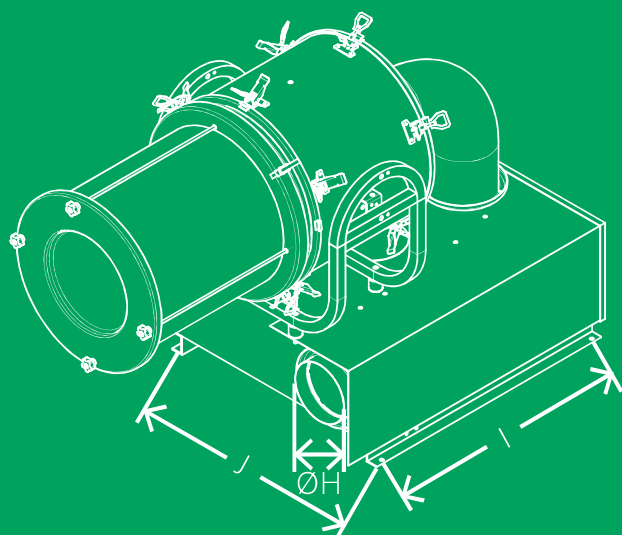
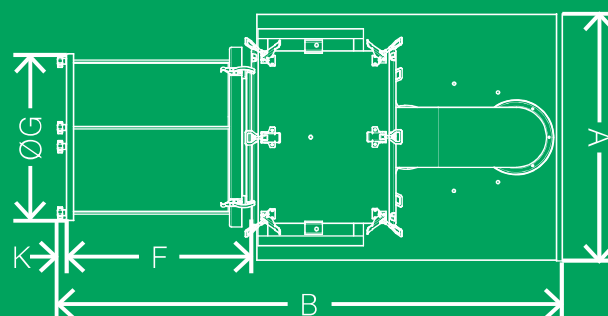
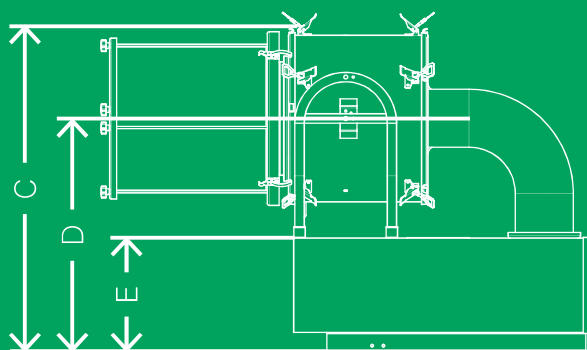
Models	Dimensions (mm)										
	A	B	C	D	E	F	G	ØH	I	L	ØM
Darwin 600	487	457	300	180	324	170	365	100	382	412	25
Darwin 1200	563	574	428	275	460	245	457	150	589	619	25
Darwin 2000	563	574	428	275	510	245	457	150	614	644	25
Darwin 3000	576	665	505	275	594	245	523	200	684	714	25

Models	Maximum air flow (m ³ /h) * 50/60 Hz		Maximum noise level (dbA)		Opening inlet (mm)	RPM (rpm)		Net Weight (kg)	Power (kW)	
	From	To	From	To		50 Hz	60 Hz		50 Hz	60 Hz
Darwin 600 T	500	600	67	72	100	2800	3400	21	0,37	0,43
Darwin 600 M	500	600	62	67	100	2800	3400	21	0,37	0,43
Darwin 600 D	500	600	62	67	100	2800	3400	21	0,37	0,43
Darwin 1200 T	1350	1650	71	76	150	2800	3400	35	1,50	1,75
Darwin 1200 M	1270	1500	71	76	150	2800	3400	35	1,50	1,75
Darwin 1200 D	1270	1500	71	76	150	2800	3400	35	1,50	1,75
Darwin 2000 T	1920	2370	73	78	150	2800	3400	39	2,20	2,55
Darwin 2000 M	1950	2430	73	78	150	2800	3400	39	2,20	2,55
Darwin 2000 D	1800	2180	73	78	150	2800	3400	39	2,20	2,55
Darwin 3000 T	3000	3300	74	79	200	2800	3400	62	3,00	3,45
Darwin 3000 M	2900	3200	72	77	200	2800	3400	62	3,00	3,45
Darwin 3000 D	2900	3200	71	76	200	2800	3400	65	3,00	3,45

* Free inlet

Standard voltage: 50 HZ 230V/400V - 60 Hz 265V/400V

Technical Data



2. Guard and Clipper

Models	Dimensions (mm)										
	A	B	C	D	E	F	ØG	ØH	I	J	K
Guard + Darwin 600 + Clipper	550	1074	860	612	300	363	365	98	542	513	19,5
Guard + Darwin 1200 + Clipper	655	1338	860	618	300	483	407	148	642	608	19,5
Guard + Darwin 2000 + Clipper	655	1364	860	618	300	483	407	148	642	608	19,5
Guard + Darwin 3000 + Clipper	655	1382	905	631	300	388	523	198	765	608	19,5



GALILEO EXTRA

Air Filtration

Oily mist
filter unit



Galileo Extra

Galileo Extra is a filter unit patented for mists generated by whole oil and emulsions in machine tools, reliable even with large amounts of particulate matter. It is available in 5 models with flow rates from 245 to 2.750 m³/h.

Galileo Extra guarantees high filtration efficiency, longer filter life and reduced power consumption. It is easy to install and features a highly innovative design. Galileo Extra is the ideal solution for fitting on machines.

Losma guarantees that each filter unit is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.

Patented in
Italy, Europe,
USA, China
and Japan





Operation

- The polluted air in machine tools is sucked into the lower pre-chamber of the Galileo Extra.
- The acceleration effect due to the centrifugal force, generated by a turbine, allows the atomised oil particles to unite and return to a liquid state, making use of the principle of coalescence.
- A special high-efficiency Multi-layer filter blocks and captures the smallest pollutant particles, preventing their dispersion into the environment.
- The oil in its liquid state is then returned to the machine for re-use through a special drainage outlet.





Left: example sequence taken from product operation video

Advantages

FILTERS STUDIED FOR EVEN HIGHER EFFICIENCY

Internal filters have been redesigned to increase filtration efficiency even for the smallest particles. The internal materials, tested by the Losma laboratories, have passed stress compatibility tests in contact with numerous types of oil and emulsions on the market.

REDUCED POWER CONSUMPTION

Inspired by the Blue Philosophy, Galileo Extra uses high-efficiency motors and very low power (KW).

HIGHER STATIC PRESSURE THANKS TO NEW TURBINES

Even higher static pressures to maintain optimal suction flow rates also by installing Galileo Extra at a distance from the filtering source. The special turbine designed to eliminate the problem of dust deposits on its surface, solves the problem of vibrations even with large amounts of particulate matter.





Optional

1. UV Mod

2. G-Guard pre-filter

3. G-Clipper post-filter

4. X-VIEW



1.



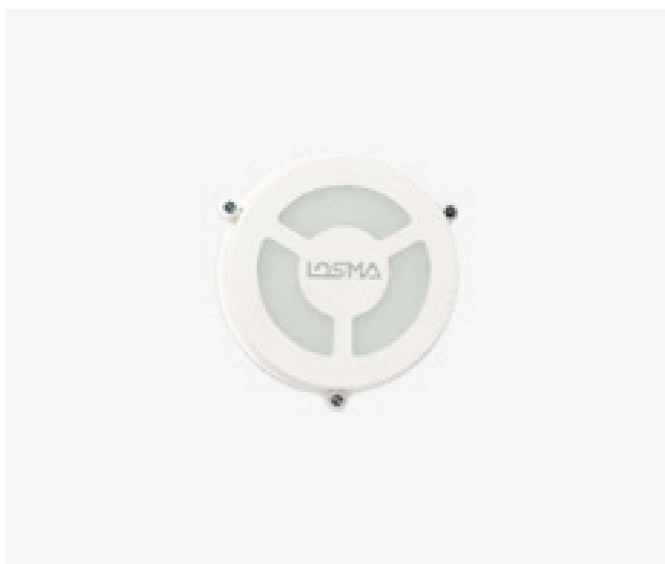
2.



3.



4.



1. UV Mod

Tested on the
SARS-Cov-2
virus

Purification system for killing viruses and bacteria

LOSMA is setting new standards for air purification and well-being in the workplace with its UV-MOD system for killing viruses and bacteria

According to laboratory tests, UV-MOD is able to kill the SARS-Cov-2 virus with an efficiency level of up to 99.99%.



OPERATION:

- The polluted air from manufacturing processes is first sucked into the Galileo Extra filtration chamber and, thanks to the centrifugal action of a special turbine and a set of high-efficiency filters, is cleaned of oil mist, vapours and any micro-particulates.
- After initial treatment, the air passes into the UV-Mod chamber.
- Thanks to the combined action of the 99.95% HEPA H13 filter and special UV-C LED modules, the UV-Mod is able to inactivate viruses and bacteria by breaking down and destroying their DNA.
- The air is then reintroduced into the environment with health levels never achieved in workplaces.

ADVANTAGES:

- Efficiency tested up to 99.99 % on SARS-Cov-2.
- Thanks to the integrated PWM - Pulse Width Modulation system, power is modulated according to a precise pulse pattern in order to maximise the effectiveness in damaging the DNA of viruses and bacteria. Pulsed modulation also reduces power consumption and increases the service life of the LED modules.
- An integrated self-diagnostic system checks the operating status of the LED modules at all times, signalling any faults or maintenance requirements.
- The combined UV-C + Hepa H13 treatment is the best air purification treatment for working environments to date.



2. G-Guard pre-filter

Metallic pre-filter to maximise filtration efficiency and filter duration in the presence of high oil mist production, even at high pressures, mixed with powders and metal shavings.

The G-Guard Plus has an inspection door for easier maintenance and is completely washable.



3. G-Clipper post-filter

Cartridge post-filter for micro-mists, vapours and fumes. Can obtain a very high level of filtration up to 99.95%.



4. X-VIEW

Filter clogging sensor

The X-VIEW sensor is able to detect the progressive clogging state of the Galileo Extra filters, signaling three main operating phases (Led version):

- GREEN: Clean Filters;
- YELLOW: Pre clogging;
- RED: Clogging.

Also thanks to an exclusive software, it is possible to detect possible ANOMALY.



Thanks to an integrated TIMER, the X-VIEW sensor allows to know when 15,000 working hours (i.e. 5 years/8 hours per day) have been achieved, which is the recommended threshold for changing the filter set. The X-VIEW sensor can be positioned on Galileo Extra or in any other part of the machine tool where the operator is more comfortable reading the data.

Thanks to the Self-learning button, it automatically sets itself to the initial values, making installation extremely easy. From that time, all flow changes are measured according to the colour scale.

X-View works with all Galileo Extra accessories (G-Guard, G-Clipper and horizontal input).

X-View also displays:

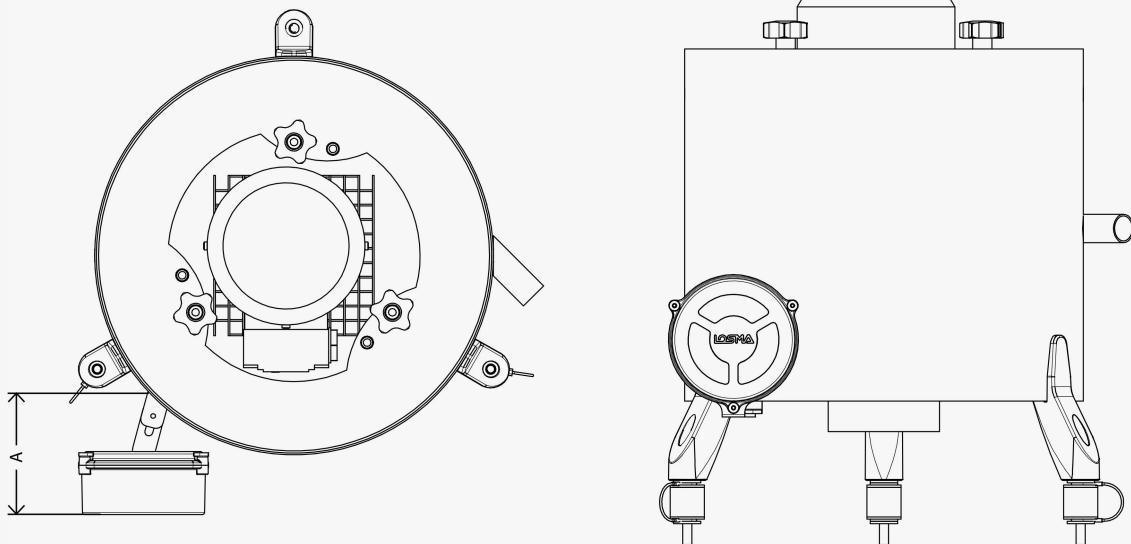
- possible upstream obstructions: whether by chip or liquid build-up. X-View is capable of detecting instantaneous or progressive clogging in the inlet pipe or suction grid of the machine tool cabin;
- zero flow alarm. For example, when Galileo is switched off or when the motor is not running or a pipe is disconnected;
- The timer indicates the achievement of 15,000 working hours - the threshold recommended for checking the filters.

Technical data

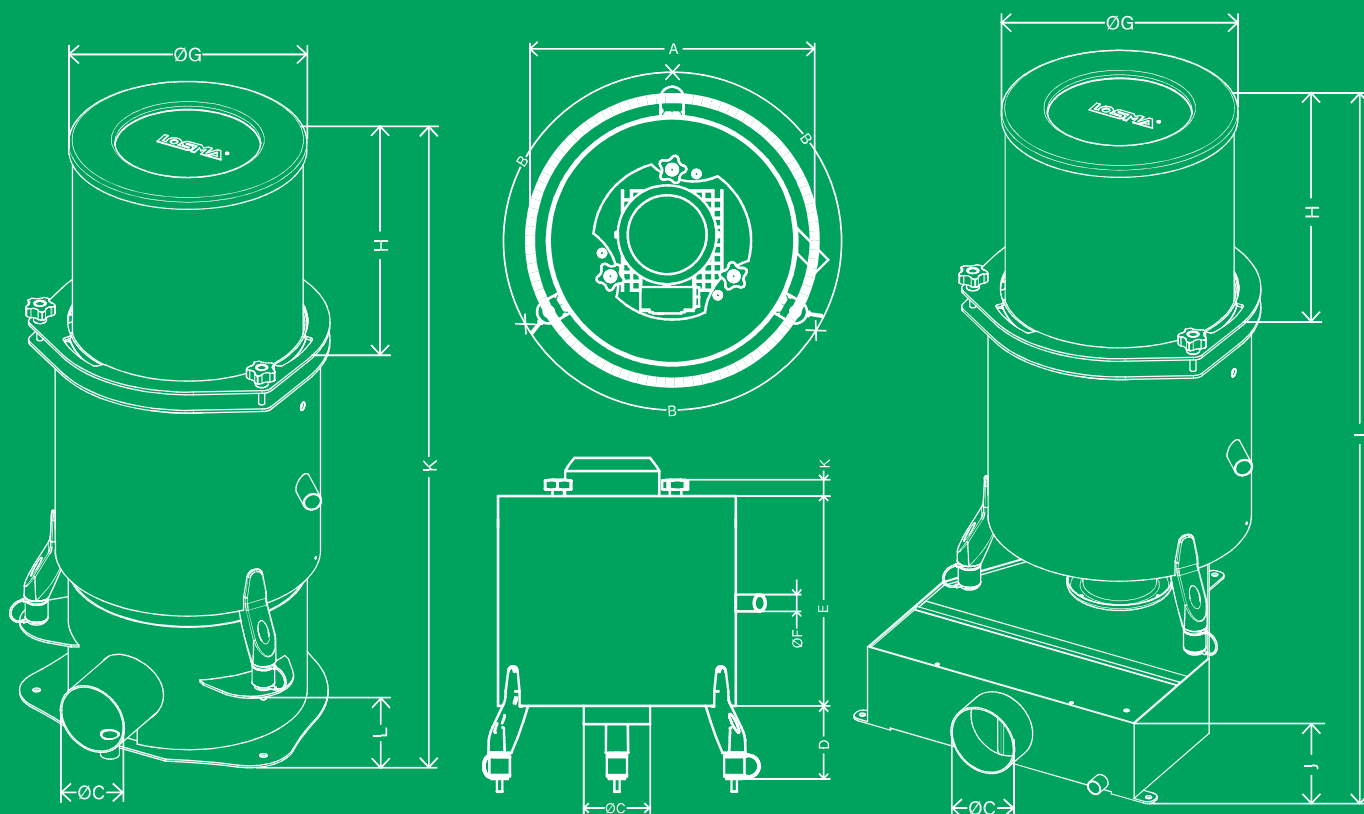
Voltage: 24V DC

Signal type: LED display

Size: A=110mm Ø=115mm



Technical Data



1. Galileo Extra



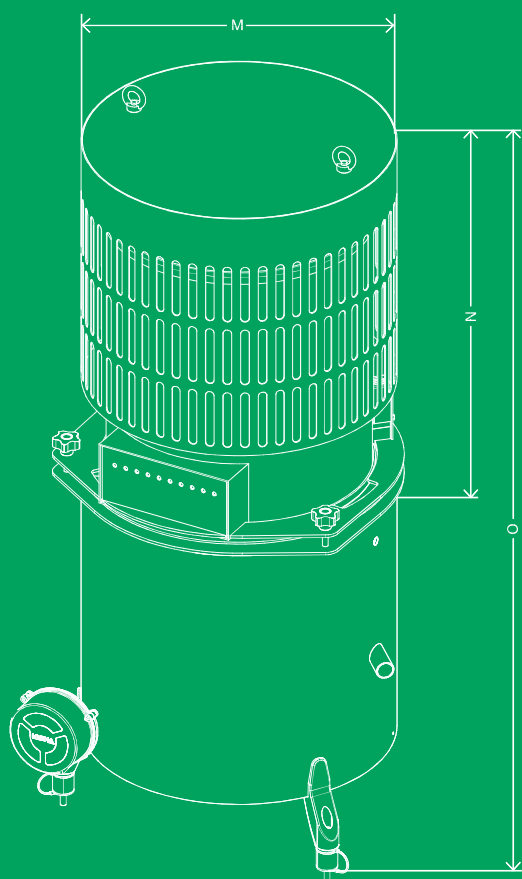
Galileo Extra

Models	Dimensions (mm)											
	ØA	<) B	ØC	D	E	ØF	ØG	H	I	J	K	L
GX250	330	120	78	100	280	25	254	310	700	163	789	99
GX500	400	120	98	100	310	25	315	310	730	198	838	118
GX1000	490	120	148	90	400	25	380	425	930	264	1083	168
GX2000	530	120	148	90	450	25	380	425	950	264	1133	168
GX3000	560	90	198	90	550	25	460	315	1025	339	1178	223

Models	Maximum air flow (m³/h) *		Pressure (Pa)		Power (kW)		Opening inlet (mm)	Noise level (dBa)		Net Weight (kg)	RPM (rpm)	
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		50 Hz	60 Hz		50 Hz	60 Hz
GX250	245	280	630	900	0,09	0,12	80	61,4	64,2	11	2810	3420
GX500	535	630	1040	1100	0,25	0,29	100	68,4	72,2	15	2835	3440
GX1000	1020	950	1520	1680	1,10	1,30	150	69,8	73,4	36	2885	3480
GX2000	1930	1760	1450	1850	1,50	1,75	150	74,4	75,6	41	2910	3510
GX3000	2300	2750	1500	2150	2,20	2,55	200	76,2	79,1	62	2910	3510

* Free inlet

Technical Data



2. UV Mod



Models	Dimensions (mm)		
	ØM	N	O
UVMOD 500	440	595	1005
UVMOD 1000	440	595	1085
UVMOD 2000	515	670	1210
UVMOD 3000	515	670	1310

Models	Maximum air flow (m³/h) *		Prevalence (Pa)		Net Weight (kg)
	50 Hz	60 Hz	50 Hz	60 Hz	
UVMOD 500	364	430	1027	1495	24,3
UVMOD 1000	753	918	1470	2140	24,5
UVMOD 2000	1220	1455	1425	1962	32,6
UVMOD 3000	1600	1920	1783	2530	33,0

Models	Net Weight (kg)
GX 500	15
GX 1000	36
GX 2000	41
GX 3000	62

Assembly	Net Weight (kg)
GX 500 + UVMOD	39,3
GX 1000 + UVMOD	60,5
GX 2000 + UVMOD	73,6
GX 3000 + UVMOD	95,0

* Free inlet



GALILEO Plus

Air Filtration

Oily mist filter unit



Galileo Plus

Galileo Plus is a filter unit patented for mists generated by whole oil and emulsions in machine tools, reliable even with particulate matter.

Galileo Plus is available in 5 models with flow rates from 325 to 3,500 m³/h.

Losma guarantees that each filter unit is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.

Patented in
Italy, Europe,
USA, China
and Japan





Operation

- The polluted air in machine tools is sucked into the lower pre-chamber of the Galileo Plus,
- The acceleration effect due to the centrifugal force, generated by a turbine, allows the atomised oil particles to unite and return to a liquid state, making use of the principle of coalescence.
- A special high-efficiency Multi-layer filter blocks and captures the smallest pollutant particles, preventing their dispersion into the environment. Oil in its liquid state is then returned to the machine for reuse through a special drainage outlet.





Left: example sequence taken from product operation video

Advantages

HIGH DEGREE OF FILTRATION AND LONG-LIFE FILTERS

The combination of the centrifugal action of the turbine and the high-efficiency multilayer filter set guarantees a high degree of filtration. The filters are positioned after the centrifugal action of the turbine, so they are exposed to a limited amount of smaller pollutants. Thanks to this positioning, Galileo Plus filters have a longer service life than those of the main centrifugal or static vacuum cleaners on the market.



MATERIALS TESTED BY LOSMA LABORATORIES

The internal materials have passed stress compatibility tests in contact with numerous types of oil and emulsions on the market.



INNOVATIVE DESIGN AND SIMPLIFIED MAINTENANCE

Galileo Plus combines Italian design and modern technology for a cleaner, more pleasant work environment. The internal filters can be changed very easily. Simply lift the cover door to access the filters inside the machine.





Optional

-
1. G-Guard pre-filter
 2. G-Clipper post-filter
 3. X-View
-

1. G-Guard pre-filter

Metallic pre-filter to maximise filtration efficiency and filter duration in the presence of high oil mist production, even at high pressures, mixed with powders and metal shavings.

The G-Guard an inspection door for easier maintenance and is completely washable.



2. G-Clipper post-filter

Cartridge post-filter for micro-mists, vapours and fumes. Can obtain a very high level of filtration up to 99.95%.



3. X-VIEW

Filter clogging sensor

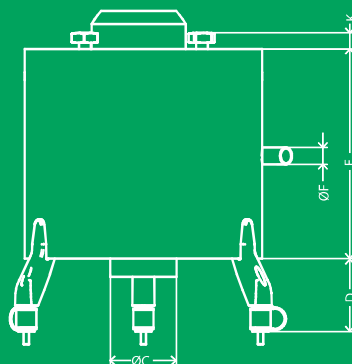
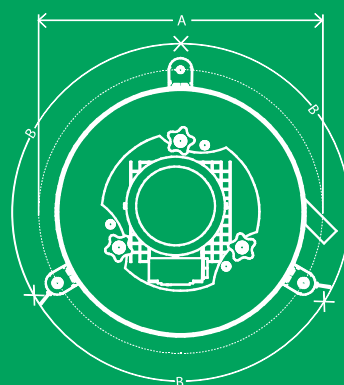
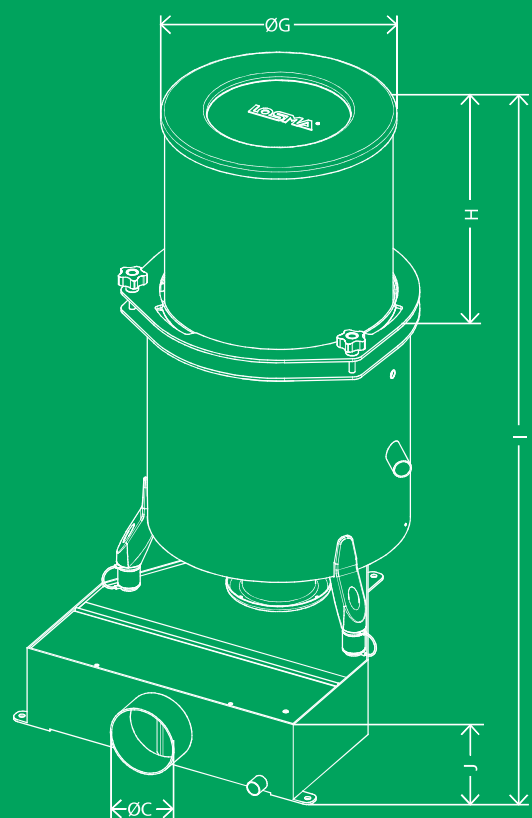
The X-VIEW sensor is able to detect the progressive clogging state of the Galileo Plus filters, signaling three main operating phases:

- GREEN: Clean Filters;
- YELLOW: Pre clogging;
- RED: Clogging.

Also thanks to an exclusive software, it is possible to detect possible anomaly.



Technical Data

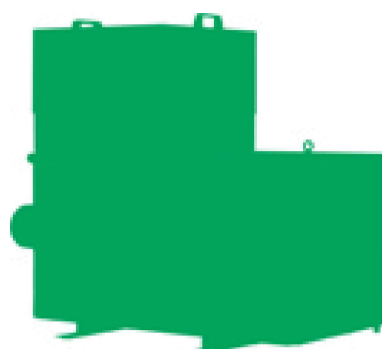
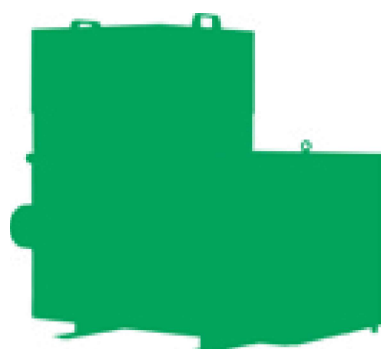
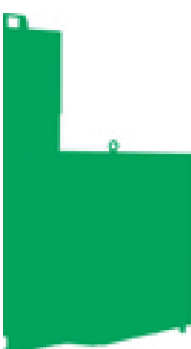




Models	Dimentions (mm)										
	ØA	<) B	ØC	D	E	ØF	ØG	H	I	J	K
Galileo Plus 250	350	120	78	98	388	25	254	314	698	93	22
Galileo Plus 500	400	120	98	98	418	25	315	314	732	113	26
Galileo Plus 1000	490	120	148	88	508	25	380	435	940	163	75
Galileo Plus 2000	530	120	148	88	558	25	380	435	990	163	33
Galileo Plus 3000	560	90	198	88	658	25	460	350	1024	218	25

Models	Maximum air flow (m³/h)* 50/60 Hz		Pressure (Pa) 50/60 Hz		Power (kW)		Opening inlet (mm)	Noise level (dBa)		Net Weight (kg)	RPM (rpm)	
	From	To	From	To	50 Hz	60 Hz		50 Hz	60 Hz		50 Hz	60 Hz
Galileo Plus 250	310	450	260	410	0,09	0,12	80	58	60	10	2900	3450
Galileo Plus 500	600	850	740	900	0,25	0,29	100	68	69	14	2900	3450
Galileo Plus 1000	1120	1550	1000	1200	0,55	0,63	150	70	71	29	2900	3450
Galileo Plus 2000	1450	2230	830	1300	1,10	1,30	150	72	73	34	2900	3450
Galileo Plus 3000	2280	3500	1250	1500	1,50	1,75	200	71	75	54	2900	3500

* Free inlet



ICARUS

Air Filtration

Oily mist
filter unit



Icarus

Icarus is a static filter unit for the purification of air containing oily mists, micro-mists and smoke resulting from the use of coolants (emulsion like neat oil). It can be used on all types of machine tools and for all removal operations.

It is available in 3 sizes, with flow rates from 600 to 2000 m³/h and with different combinations of increasing filtration efficiency, up to an efficiency of 99,95%.

Losma guarantees that each filter unit is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.

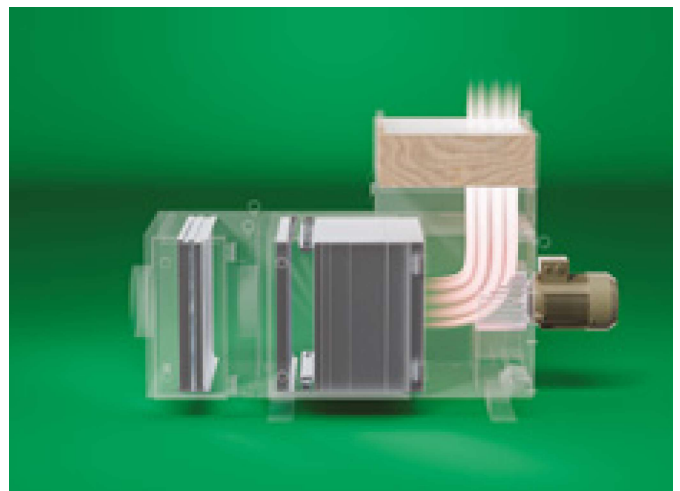
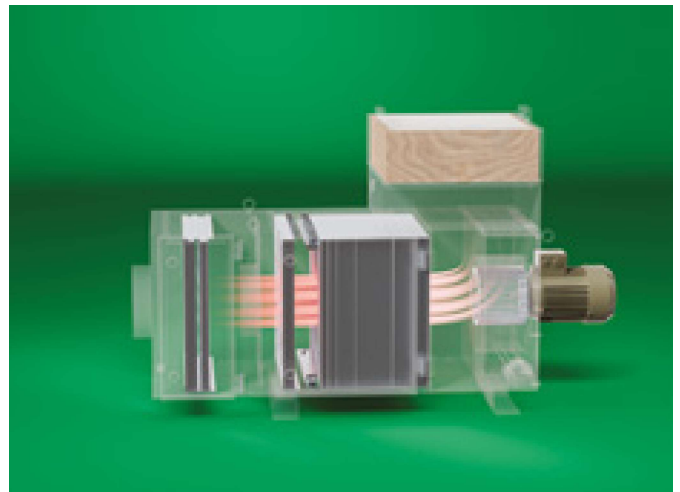
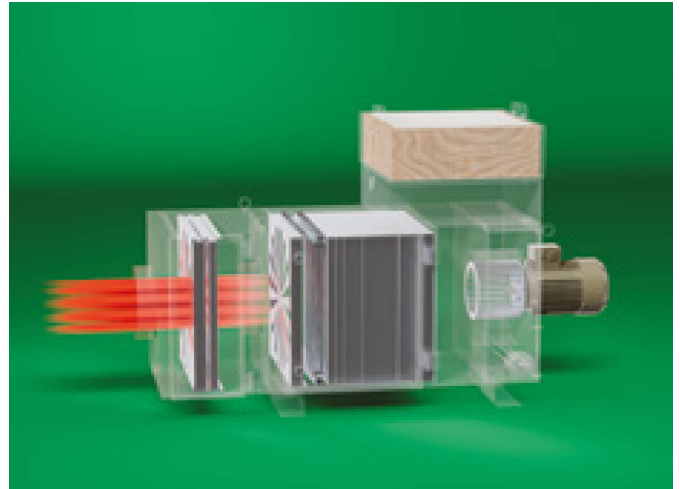


LOSMA[®]

ICARUS

Operation

- The polluted air is suctioned in thanks to the vacuum generated by a high-efficiency centrifugal fan placed over the filters. The fan is thus free from any possibility of damage as it only works with clean air, free of any residual pollutants.
- The air initially passes through a special baffle that has the task of evenly distributing the suctioned air over the entire useful contact surface of the filters, thus ensuring proper utilisation of the filters.
- The air then passes through a battery of filters with increasing efficiency until an efficiency of more than 95% is reached with pollutant particles even smaller than one micron, which can be raised to 99.95% with the use of an absolute post-filter (HEPA FILTER) in accordance with EN 1822.

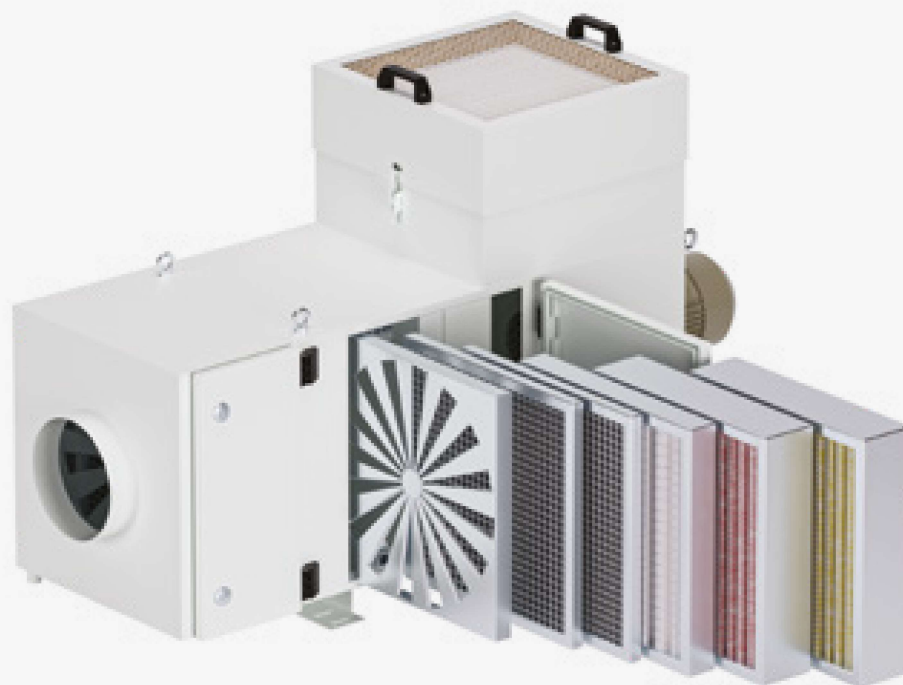


Right: example sequence taken from product operation video

SEQUENCE OF THE SUPPLIED FILTERS:

The arrangement of the Icarus internal filters is designed to provide increasing filtration efficiency.

The filters are easily accessible by removing the tightening screws and opening the side door, allowing for simple, fast and clean maintenance.



1. METALLIC G2

65-80% efficiency in accordance with standard UNI EN 779.

3. SYNTHETIC F7

85% efficiency.

2. SYNTHETIC G3

80-90% efficiency in accordance with standard UNI EN 779.

4. SYNTHETIC F9

95% efficiency (*also available with H13 upon request).

1.



2.



3.



4.



Advantages

ENERGY EFFICIENCY

The use of high-efficiency centrifugal fans enables high performance in terms of flow rate and pressure, with considerably reduced installed power and limited energy consumption. Icarus is also remarkably quiet.

FAST AND EASY MAINTENANCE

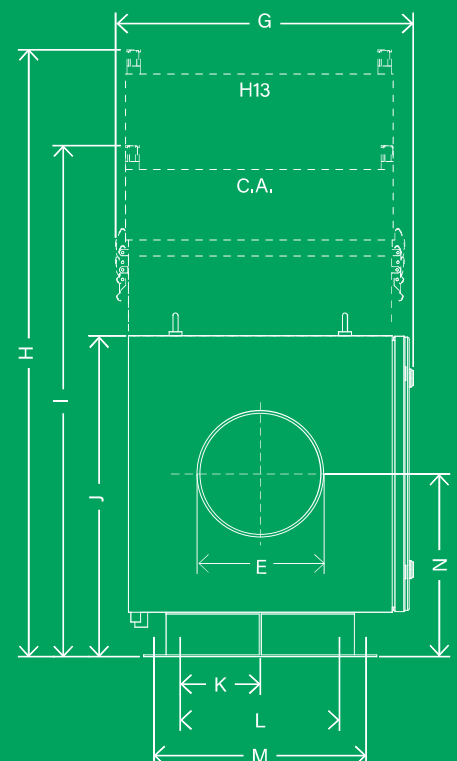
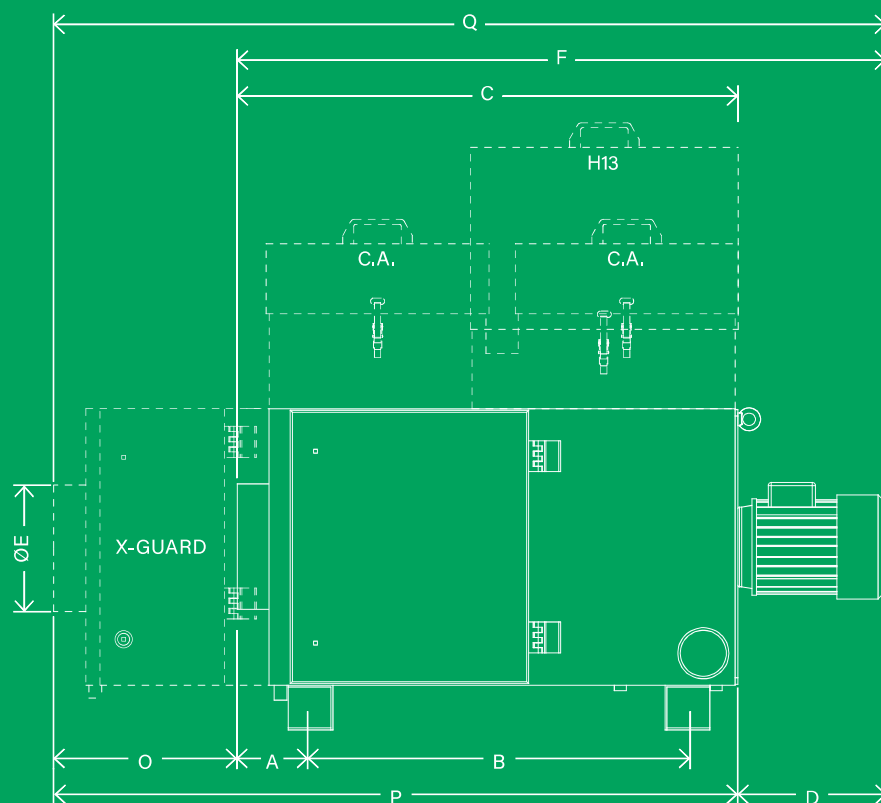
Access to the filter section is truly simple and straightforward, with no need to unscrew or dismantle anything. Simply open the door closed with two locks for easy access to the filters, which can be removed very easily and replaced quickly.

PRESSURE GAUGE

Icarus is equipped as standard with a precise instrument to read the clogging status of the internal filters.



Technical Data



Models	Dimensions (mm)																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Icarus S	110	500	660	210	148	870	450	930	785	505	125	250	365	290	287	897	1107
Icarus M	110	600	785	235	198	1020	450	930	785	505	125	250	365	290	287	997	1232
Icarus L	170	600	815	270	198	1095	570	1050	905	625	125	250	365	350	287	1047	1317

Models	Power (kW)		Maximum air flow * (m ³ /h) 50/60 Hz		Pressure (Pa)		Opening inlet (mm)	Noise level (dba)	RPM (rpm)		Net weight (Kg)
	50 Hz	60 Hz	From	To	From	To			50 Hz	60 Hz	
Icarus S	0,37	0,44	600	670	580	800	150	68,1	2820	3360	52
Icarus M	0,75	0,75	1050	1150	1000	1400	200	69,9	2900	3390	57
Icarus L	1,5	1,5	1600	1850	1080	1500	200	71,5	2880	3410	81

* Free inlet

Icarus-E

The Icarus-E is an electrostatic extractor for the purification of air containing oil mists, micro-mists and fumes from all major machining operations that use whole oil as a coolant.

It is available in 3 sizes with flow rates from 600 to 1,700 m³/h and with different combinations of increasing filtration efficiency, up to an efficiency of 99.95% (when using the final HEPA H13 filter).

Standard unit supply includes a CE-compliant electrical panel, including a clogging and voltage presence light and safety microswitch.

Losma guarantees that each filter unit is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Operation

- The polluted air is suctioned in thanks to the vacuum generated by a high-efficiency centrifugal fan placed over the filters. The fan is thus free from any possibility of damage as it only works with clean air, free of any residual pollutants.
- The air initially passes through a special baffle that has the task of evenly distributing the suctioned air over the entire useful contact surface of the filters, and cells.
- After passing through a metal pre-filter (regenerable), the air is conveyed into the ionising section of the cells, electrostatically charging itself and then passing into the collector section composed of numerous aluminium foils that firmly retain even the most microscopic impurities.



SEQUENCE OF THE SUPPLIED FILTERS:

The arrangement of the Icarus Electrostatic internal filters is designed to provide increasing filtration efficiency. In the case of sizes M and L, the sequence Metallic G2 + Electrostatic Cell is repeated twice.

The filters are easily accessible by removing the tightening screws and opening the side door, allowing for simple, fast and clean maintenance.



1. METALLIC G2

65-80% efficiency in accordance with standard UNI EN 779.

3. ELECTROSTATIC CELL

2. SYNTHETIC F7

85% efficiency.

1.



2.



3.



Advantages

VERSATILITY AND MODULARITY

The possibility of using pre and post filtration systems allows for the use of the Icarus-E filter for all modern mechanical processes, from the simplest to the most demanding. The 3 different construction models and relative suction power of the Icarus-E filter also make it easier to choose a solution that is always adequate for your needs without wasting energy on oversized systems or, on the contrary, inefficient on inadequately sized systems.

REGENERABLE

Icarus-E only uses regenerable filters, allowing considerable savings in the purchase, maintenance and disposal of normal clogging filters.

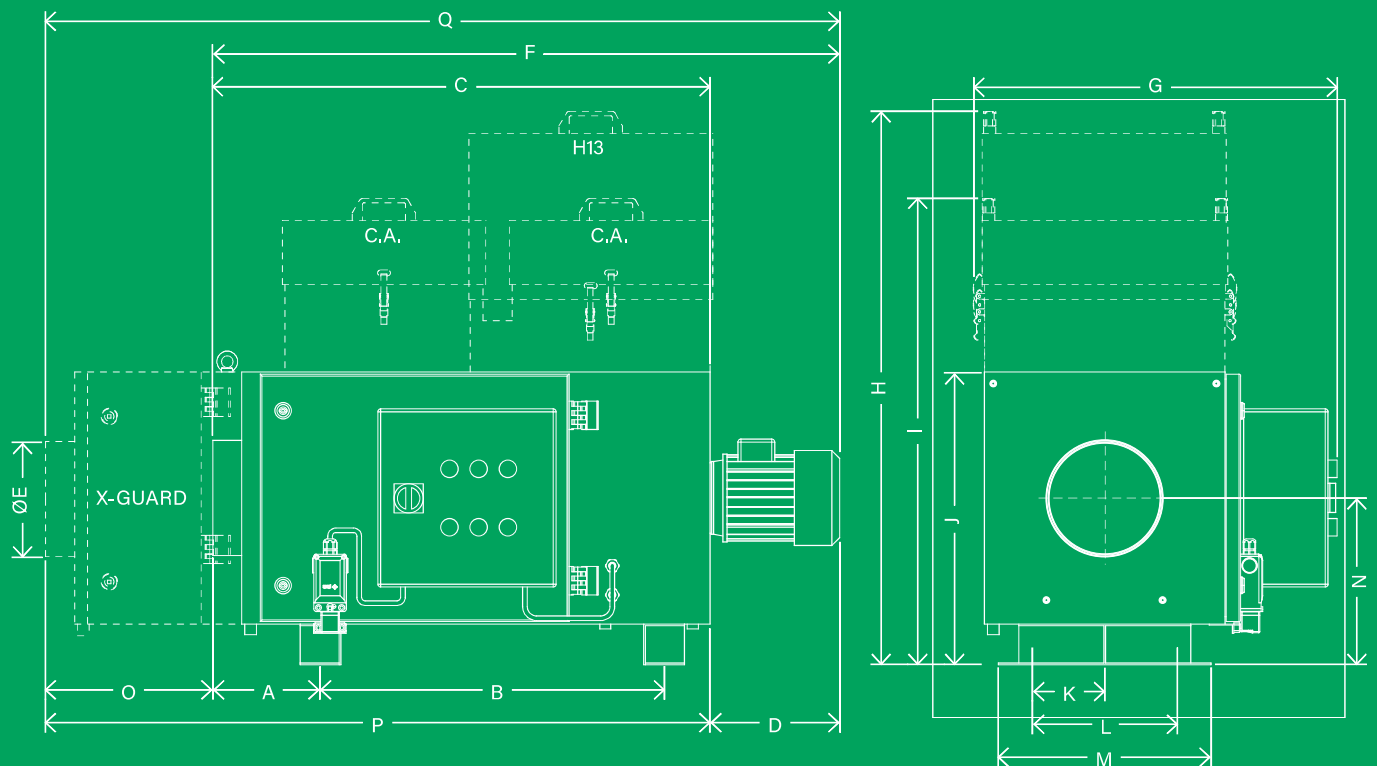
* In the Icarus-E S version the pre-filtration consists of an F7 filter.

FAST AND EASY MAINTENANCE

Access to the filter section is truly simple and straightforward, with no need to unscrew or dismantle anything. Simply open the door closed with two locks for easy access to the filters, which can be removed very easily and replaced quickly.



Technical Data





Models	Dimensions (mm)																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Icarus ES	1380	500	655	210	148	865	450	930	785	505	125	250	365	290	287	942	1152
Icarus EM	180	600	855	235	198	1105	450	390	785	505	125	250	365	290	287	1157	1392
Icarus EL	160	600	855	270	198	1215	570	1050	905	625	125	250	365	350	287	1172	1442

Models	Power (kW)		Maximum air flow* (m ³ /h) 50/60 Hz		Pressure (Pa)		Opening inlet (mm)	Noise level (dba)	RPM (rpm)		Net weight (Kg)
	50 Hz	60 Hz	From	To	From	To			50 Hz	60 Hz	
Icarus ES	0,37	0,44	600	670	580	800	150	68,1	2820	3360	52
Icarus EM	0,75	0,75	1050	1150	1000	1400	200	69,9	2900	3390	57
Icarus EL	1,5	1,5	1600	1850	1080	1500	200	71,5	2880	3410	81

* Free inlet



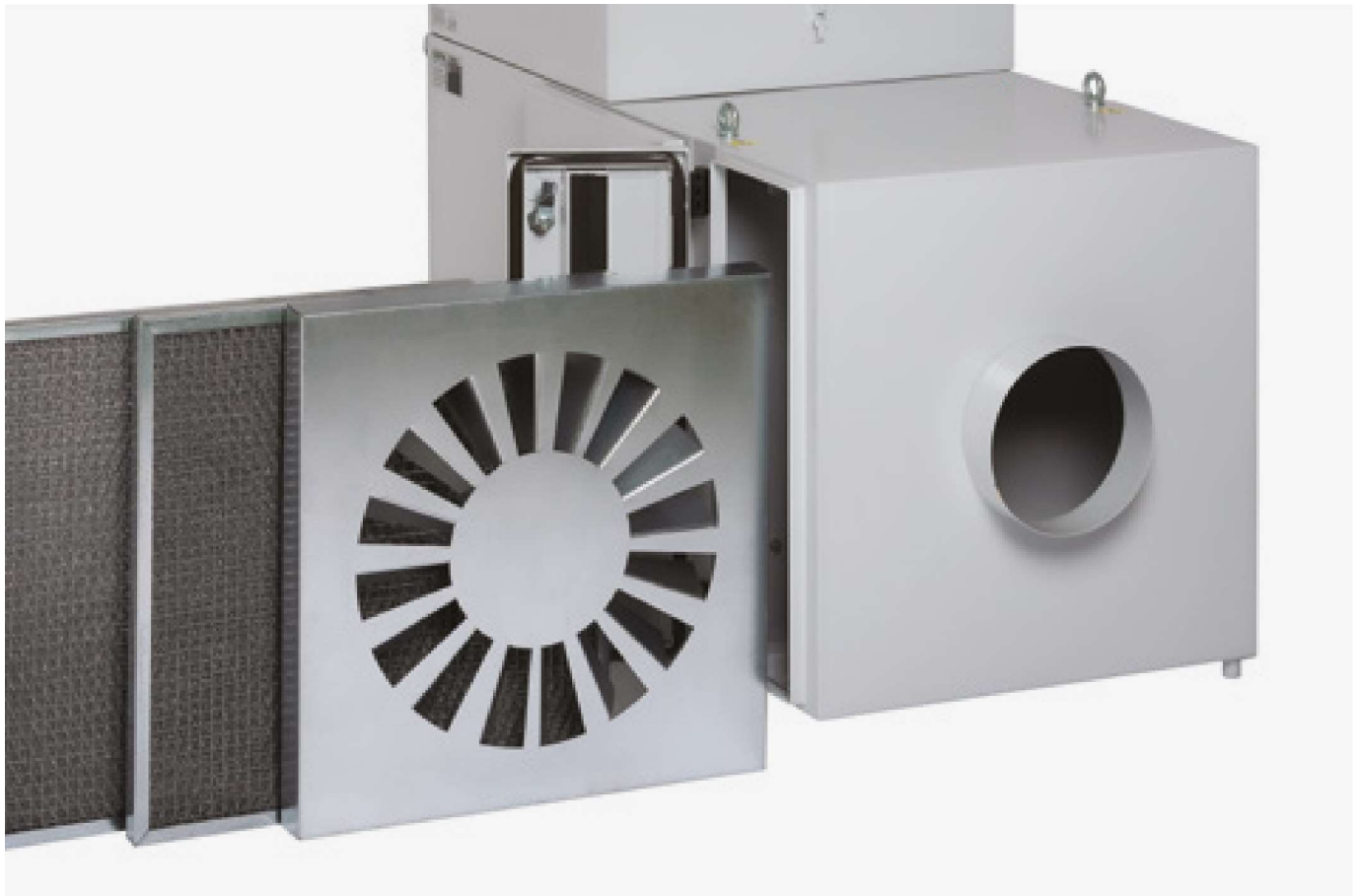
Optional

1. X-Guard pre-filter

2. H13 post-filter

1. X-Guard pre-filter

Pre-filter for chips and dust, equipped with metal and synthetic filter stages. Useful for maximising filtration efficiency at high outputs of oil mist mixed with metal chips and dust.



2. H13 post-filter

Can obtain a very high level of filtration, 99.95% according to EN 1822. Especially suitable in the presence of micro-mists or fumes.





PEGASO

Air Filtration

Oily mist filter unit
with synthetic nanofiber filters



Pegaso

Pegaso is a static filter unit for the purification of oily mists, micro-mists and smoke resulting from the use of coolants (emulsion or neat oil). It can be used on all types of machine tools and for all removal operations.

It is available in five sizes (S – M – L – XL – XXL), with flow rates from 730 to 3860 m³/h and with an increasing filtration efficiency up to 99,95%.

All Filters are tested and inspected before shipping.

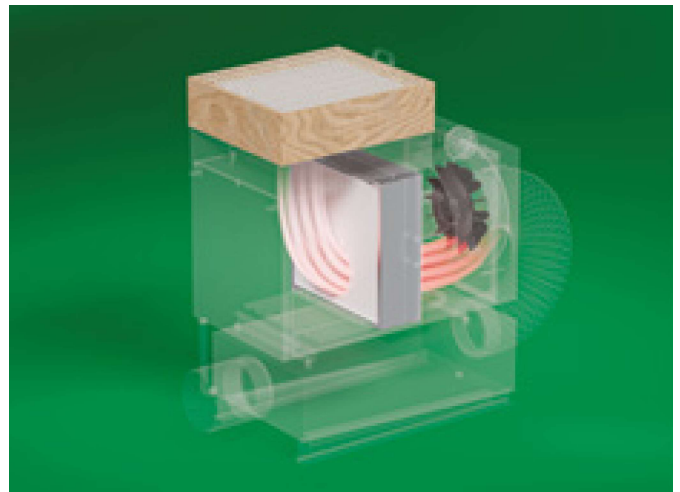
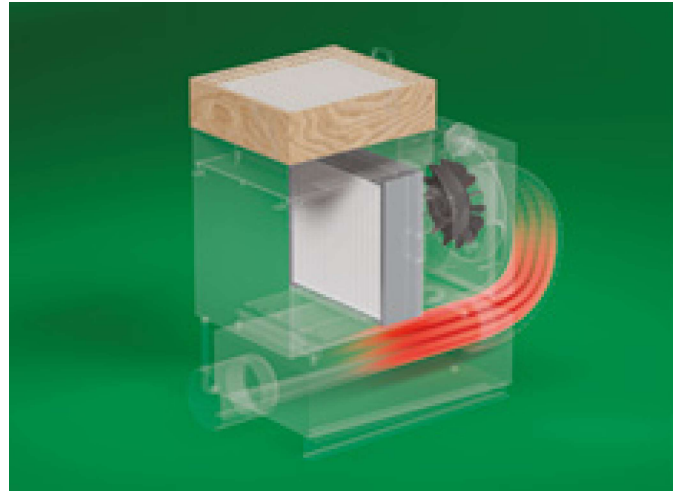
Losma guarantees that each filter unit is individually tested through rigorous control procedures. A quality and functional test certificate is issued for each unit.



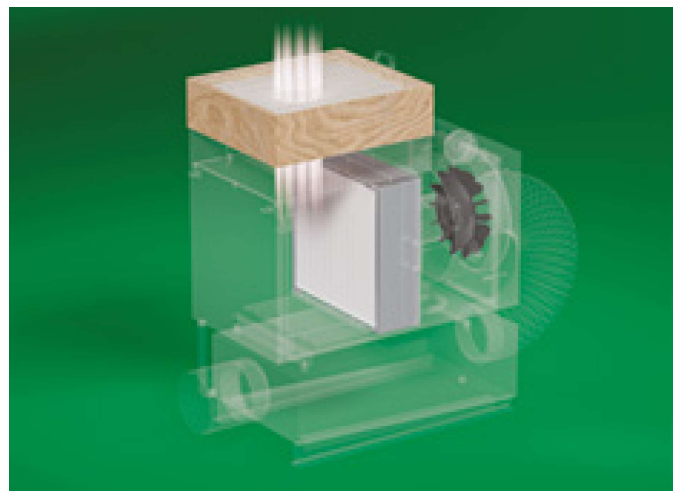


Operation

- The polluted air in the machine tool is sucked in and, after being evenly distributed by an inlet baffle, passes through the filters provided in sequence.
- The passage of the air through the new innovative F9 filters made of synthetic nanofibers with high filtering media guarantees maximum air purification.
- After the various filtration passages (G2 metallic, synthetic 60 PPI and F9 microfiber, as well as the optional H13), the air is finally conveyed back into the surrounding environment.



Right: example sequence taken from product operation video



SEQUENCE OF THE SUPPLIED FILTERS:

The arrangement of the Pegaso internal filters is designed with increasing 3-stage filtration efficiency:

- Metal G2 filter
- 60 PPI Polyurethane filter
- F9 Synthetic Nanofiber filter

In this way, Pegaso is able to guarantee superior efficiency to remove all pollutant particles down to the micron range.

The filters are easily accessible by removing the two tightening screws and opening the side door, allowing for simple, fast and clean maintenance.

1. Metal G2 filter
2. 60 PPI Polyurethane filter
3. F9 Synthetic Nanofiber filter



Advantages

NEW FRONT IMPELLER AND OPTIMISED DRAINAGE SYSTEM

The drainage system is fully optimised thanks to the new front impeller capable of significant pollutant separation at the inlet.

INNOVATIVE FILTER AND MATERIAL SEQUENCE

By combining innovative materials such as F9 filters made of synthetic nanofibers and a well thought-out filter sequence with increasing efficiency, Pegaso is able to offer an extended filter life cycle and high filtration efficiency for all types of work.

AVAILABLE IN 5 SIZES, WITH OPTIONAL PRE AND POST FILTERS

Pegaso is available in 5 sizes, with variable flow rates depending on processing requirements. It can also be configured with a Pre and Post Filter, both optional, to bring the overall filtration efficiency up to 99.95%.





Optional

1. Pressure gauge / Pressure switch / X-View

2. P-Guard pre-filter

3. H13 post-filter

1. Pressure gauge / Pressure switch / X-View

The Pegaso series offers the possibility of monitoring filter occlusion in real time, choosing the option that best suits your needs from the three configuration options offered:

- Pressure gauge
- Pressure switch
- X-View



2. P-Guard pre-filter

Metallic pre-filter to maximise filtration efficiency and filter duration in the presence of high production of oil mists, mists mixed with powders and metal shavings.

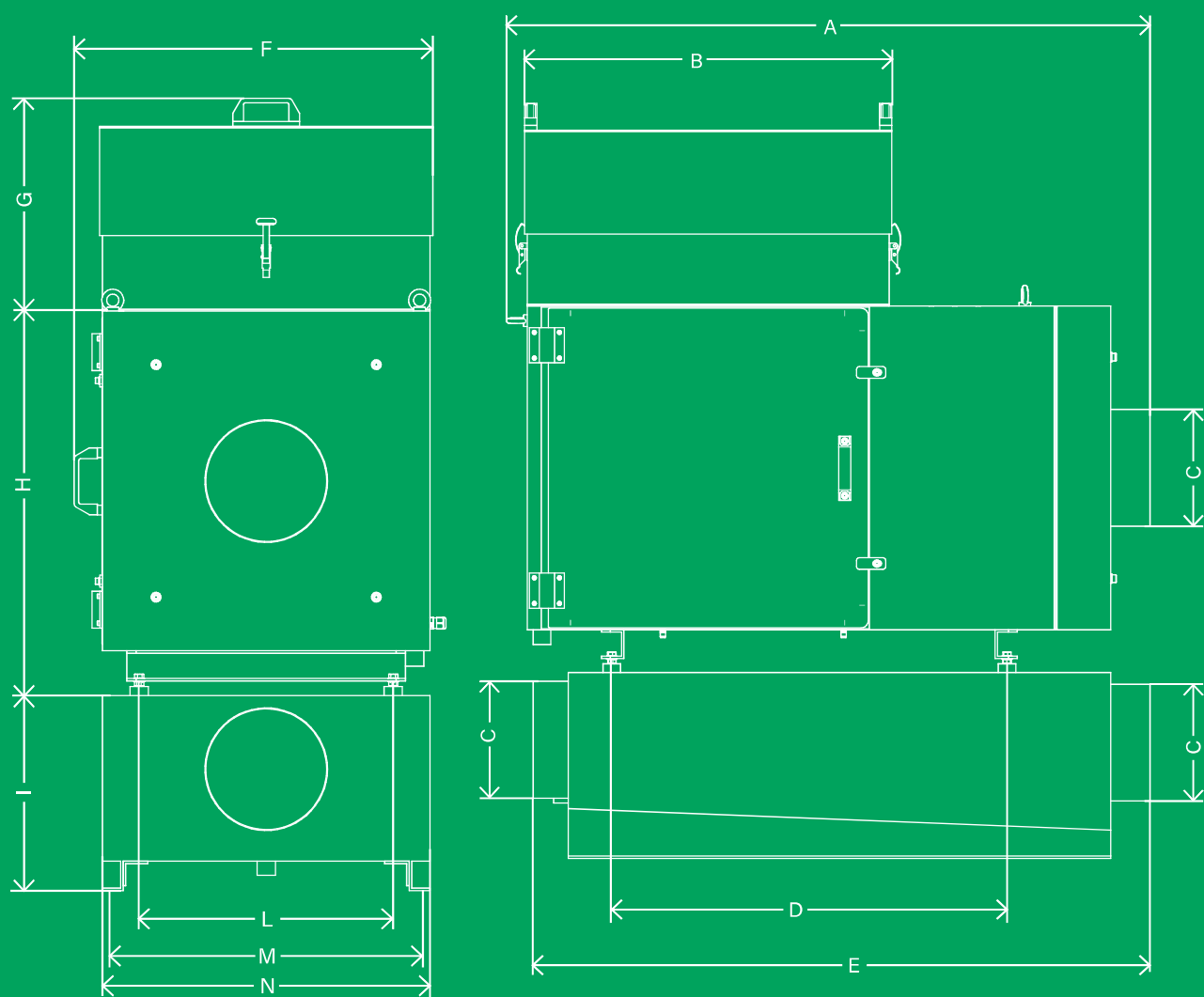


3. H13 post-filter

H13 glass microfibre post-filter, providing a filtration efficiency of up to 99,95%. This filter has two optional configurations: internal or external.



Technical Data



Models	Dimensions (mm)												
	A	B	C	D	E	F	G	H	I	L	M	N	O
Pegaso S/M	1020	500	150	590	915	465	345	510	300	295	380	415	25
Pegaso L/XL/XXL	1100	630	200	675	1065	585	345	630	350	415	500	535	25

Models	Power (kW)		Air flow (m ³ /h) *		Prevalence (Pa)		Noise level (dba)		Opening inlet (mm)	Net weight (Kg)
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		
Pegaso S	0,37	0,43	730	800	500	740	67,8	70,5	150	61
Pegaso M	0,75	0,86	950	1170	830	1250	69,6	72,8	150	68
Pegaso L	1,5	1,75	1600	1800	970	1400	73,8	76,6	200	96
Pegaso XL	2,2	2,54	2000	2400	1200	1750	77,6	79	200	103
Pegaso XXL	2,2	2,54	3300	3860	1740	2530	79,5	83,6	200	106

* Free inlet. Standard filter configuration without optional H13 post-filter.

Liquid Purification



Demag	109
Detex	121
Decom	131
Filterjet	139
Magneto	155
Master	163
Skim	187
Spring	195



Demag

Liquid Purification

Magnetic rotating disc purifier



Demag

Demag is a magnetic rotating disc purifier for the separation of magnetic pollutant particles from lubricating liquids used in machining.

The Demag series is available in 7 standard models capable of purifying 50 to 400 l/min of emulsified oil and 25 to 200 l/min of neat oil.

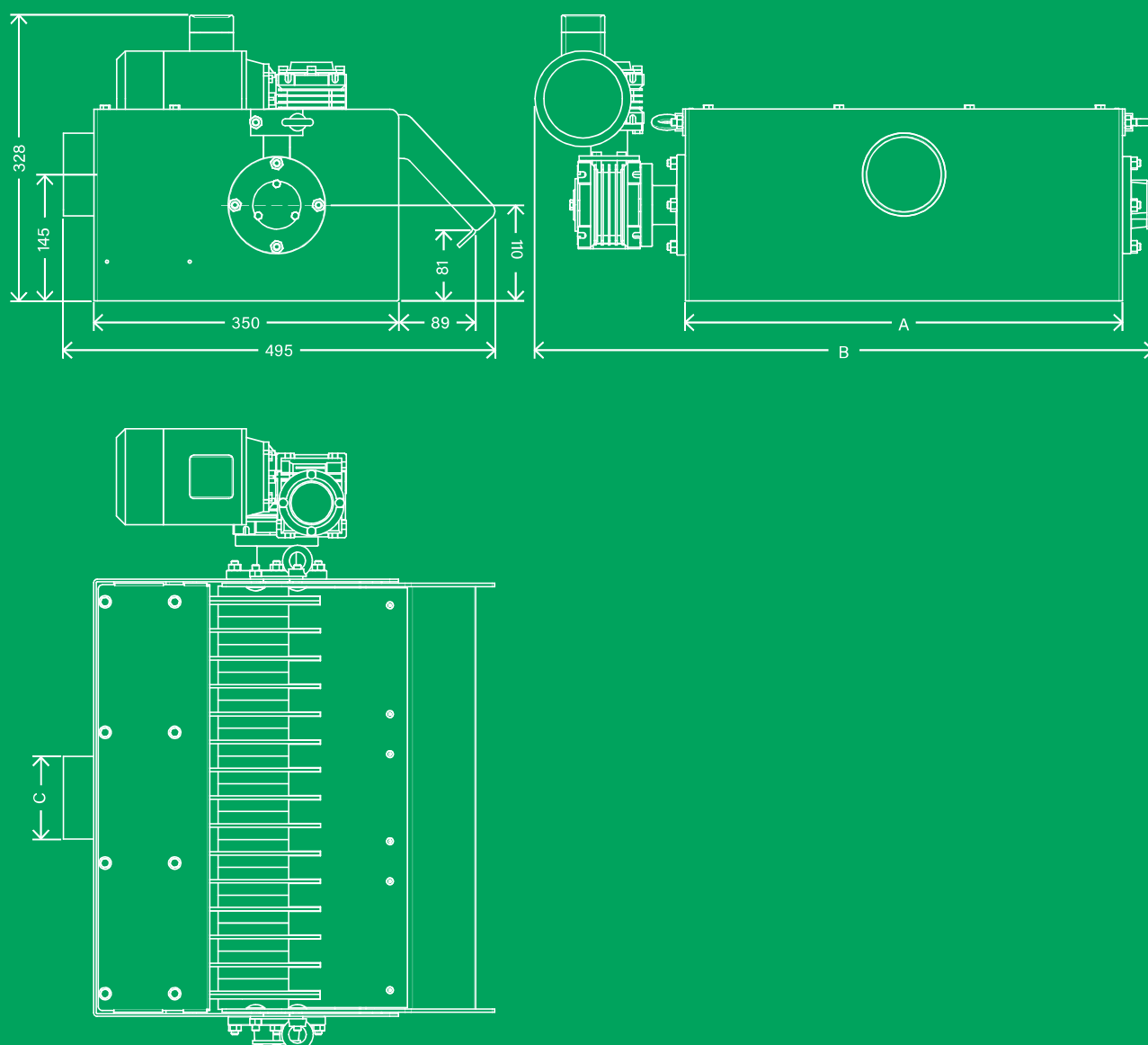
Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.





Technical Data



Models	Dimensions (mm)		
	A	B	C
Demag 50	160	370	3"
Demag 100	236	446	3"
Demag 150	350	560	3"
Demag 200	426	635	3"
Demag 250	502	710	3"
Deamg 300	654	885	3"
Demag 400	844	1080	3"
Demag 500	1034	1265	3"

Models	Max emulsion flow rate (l/min)	Max neat oil flow rate (l/min)	Power (kW)		Weight (Kg)	230 V - 50 Hz A	265 V - 60 Hz A	400 V - 50 Hz A	460 V - 60 Hz A
			50 Hz	60 Hz					
Demag 50	50	25	0,18	0,18	32/37	1,16	1,18	0,69	0,68
Demag 100	100	50	0,18	0,18	40/45	1,16	1,18	0,69	0,68
Demag 150	150	75	0,18	0,18	51/56	1,16	1,18	0,69	0,68
Demag 200	200	100	0,18	0,18	60/65	1,16	1,18	0,69	0,68
Demag 250	250	125	0,18	0,18	70/78	1,16	1,18	0,69	0,68
Deamg 300	300	150	0,18	0,18	90/NN	1,16	1,18	0,69	0,68
Demag 400	400	200	0,18	0,18	120/NN	1,16	1,18	0,69	0,68
Demag 500	500	250	0,18	0,18	140/NN	1,16	1,18	0,69	0,68

Technical data may vary depending on working conditions

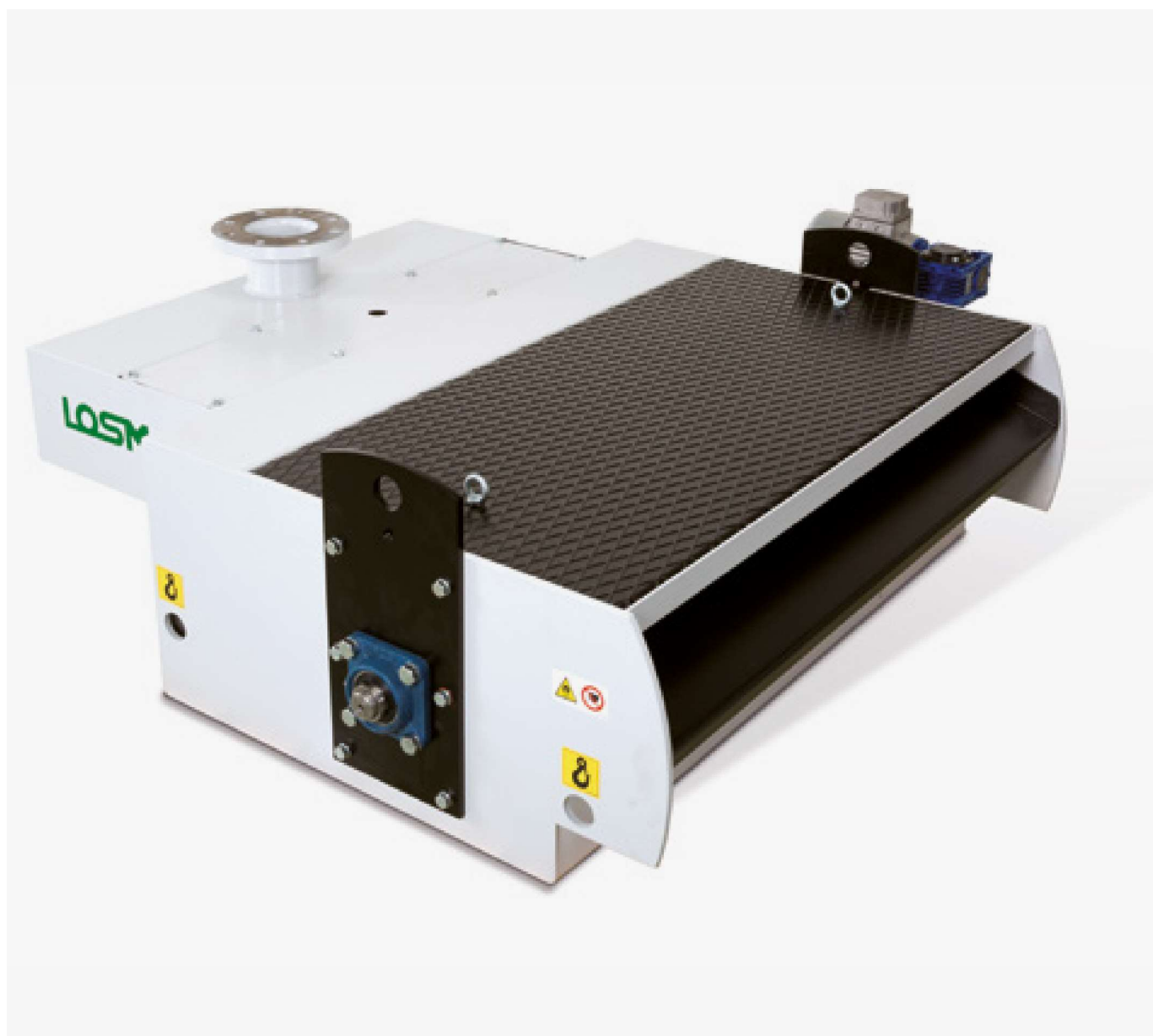
Demag Pesante Heavy duty

Demag Pesante was instead designed for heavy-duty flow rates, available in 5 models, capable of purifying 600 to 1800 l/min of emulsion and 300 to 900 l/min of neat oil.

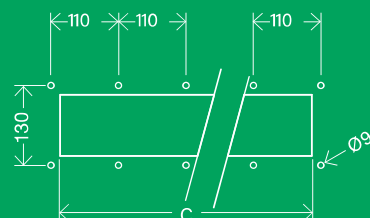
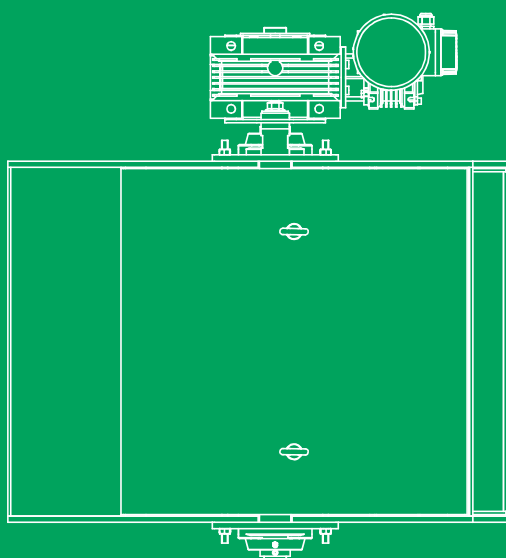
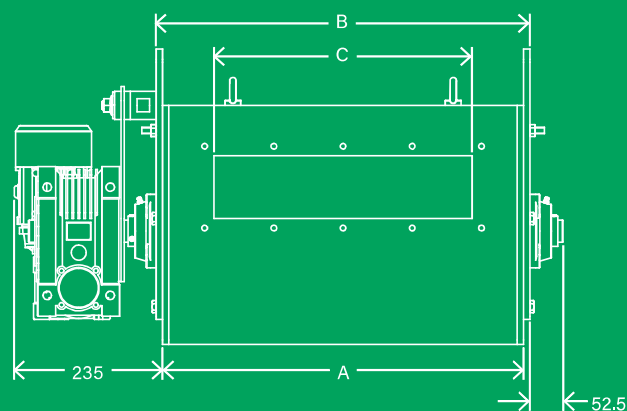
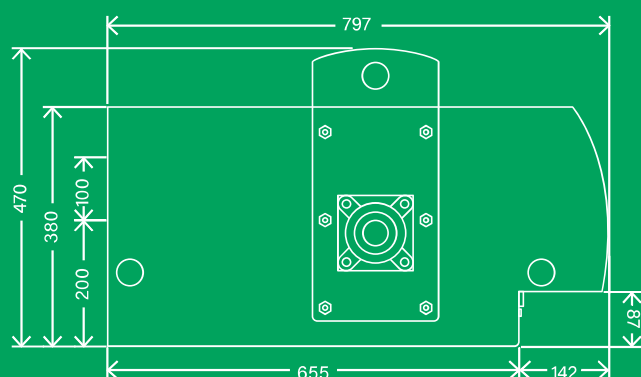
The especially robust construction of the Demag Pesante is suitable for large machine tools, centralised systems, machining centres, deep grinding and deep hole drilling or other heavy-duty machining.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Technical Data



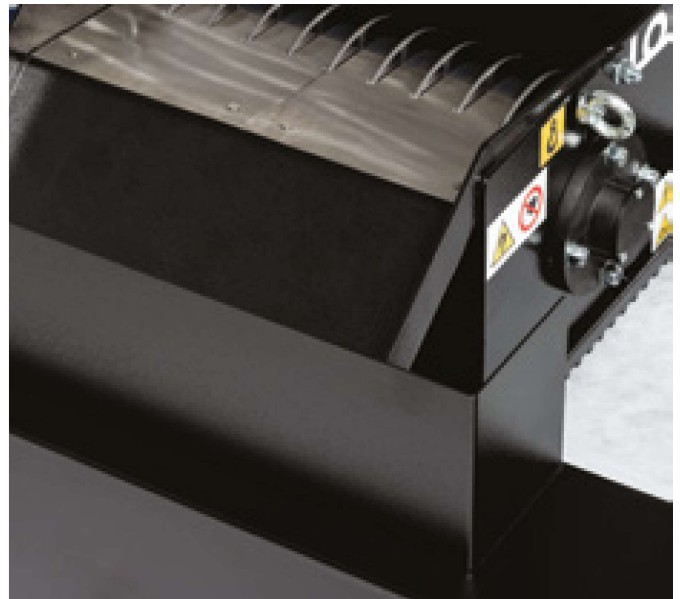
Models	Dimensions (mm)		
	A	B	C
Demag-P 600	574	594	410
Demag-P 900	849	869	520
Demag-P 1200	1124	1144	740
Demag-P 1500	1398	1418	960
Demag-P 1800	1674	1694	1180

Models	Max emulsion flow rate (l/min)	Max neat oil flow rate (l/min)	Power (kW)		Weight (Kg)	230 V - 50 Hz A	265 V - 60 Hz A	400 V - 50 Hz A	460 V - 60 Hz A
			50 Hz	60 Hz					
Demag-P 600	600	300	0,18	0,21	270	1,16	1,18	0,67	0,68
Demag-P 900	900	450	0,18	0,21	400	1,16	1,18	0,67	0,68
Demag-P 1200	1200	600	0,18	0,21	450	1,16	1,18	0,67	0,68
Demag-P 1500	1500	750	0,18	0,21	NN	1,16	1,18	0,67	0,68
Demag-P 1800	1800	900	0,18	0,21	580	1,16	1,18	0,67	0,68

Technical data may vary depending on working conditions

Operation

- The contaminated liquid passes through the rotating magnetic disc assembly, where the magnetic contaminating particles are captured.
- A scraper blade continuously removes the particles from the rotating assembly and sends them to a chute for discharge into the drawer.
- The purified liquid is collected in the tank below and returned to the machine tool with the appropriate electric pump or is collected by a second purifier for finer filtration.



Advantages

MODULARITY

Demag and Demag Pesante can be combined with the full range of Losma liquid purification systems to ensure more accurate filtration.

PERMANENT MATERIAL

Demag and Demag Pesante do not require a consumable filter.





Detex

Liquid Purification

Flatbed purifier



Detex

Detex is a coolant purifier that uses filter fabric to remove magnetic and non-magnetic particles from whole and emulsified oils.

The degree of filtration is determined by the choice of fabric and varies from 10 to 50 micrometres, ensuring a very high degree of purification.

Detex is available in 12 sizes with a purification capacity of 50 to 400 l/min of emulsified oil and 25 to 200 l/min of whole oil.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.





Operation

- The coolant contaminated with impurities is conveyed to the trough and distributed over the filter fabric, which retains the polluting particles and allows the clean liquid to flow out.
- The fabric progressively accumulates polluting particles until it becomes clogged, at which point the liquid is no longer able to pass through the filtering fabric so it rises to level, lifting the float and activating the microswitch (or triggering a probe system) that controls the advancement of the conveyor and the consequent replacement of the consumed fabric with new one.
- The consumed fabric is collected in a special tank located at the foot of the purifier, while the filtered liquid passes into the tank below to be sent back to the machine tool by means of the electric pump.



Advantages

AVAILABLE IN STAINLESS STEEL VERSION

Detex is also available in a stainless steel version, which is especially suitable for the purification of water or corrosive or saline liquids, typical of some mechanical engineering sectors or in the pharmaceutical and food industries.

COST EFFICIENCY

The fabric filtration guarantees a very high degree of purification with a limited initial investment.

MODULARITY AND VERSATILITY

The Detex series range makes it easier for you to purchase a solution that is suitable for your needs, avoiding excessive consumption for undersized systems or, on the contrary, inefficient consumption for oversized systems. Furthermore, the wide choice of fabrics makes the purification system very versatile and adaptable to different uses simply by changing the type of filter media.



Optional

SKIM

Eliminator of superficial oils which allows the quality of coolants to be maintained for a long time and eliminates odours generated in the presence of anaerobic bacterial flora.

DEMAG (1)

Purifier for magnetic material filtration; uses a series of discs to retain the solid pollutant suspended in the coolant.

BOOSTER TANK

To collect dirty liquid for filter supply.

CONTAINMENT TANK (2)

To collect the clean liquid to be returned to the machine tool.

ELECTRICAL CABINET (3)

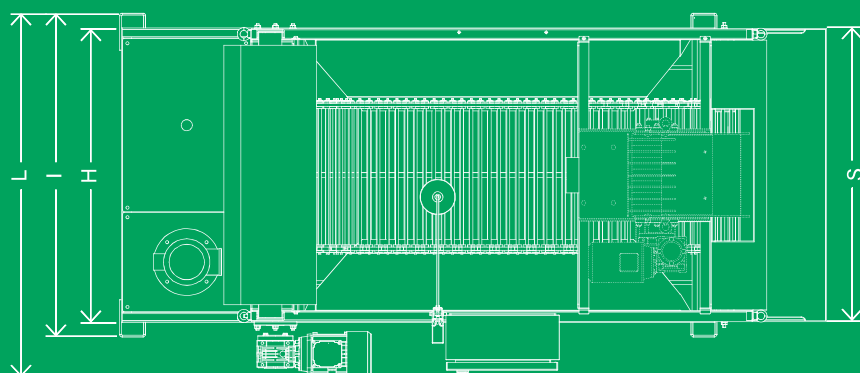
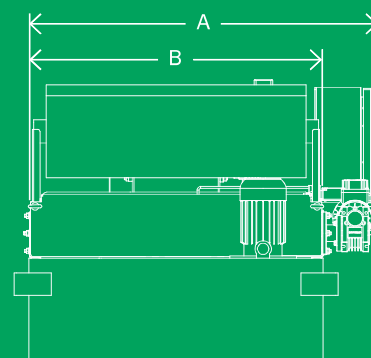
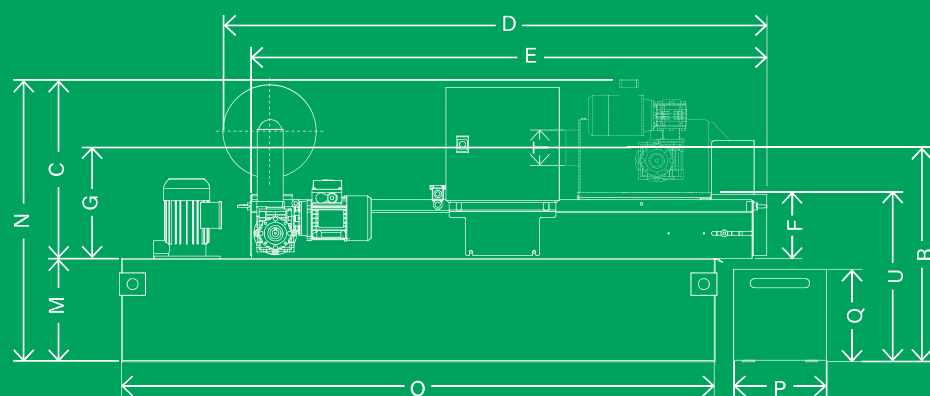
For supplying all utilities, controlling and managing all signals.

PUMPS (4)

For clean liquid delivery from 0.1 bar to 100 bar.



Technical Data



Models	Dimensions (mm)																		
	A	B	C	D *	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	U
30	630	480	430	815	750	178	298	400	480	630	200	630	825	200	170	500	480	2"	378
50	750	590	480	1115	1040	178	298	593	673	780	280	760	1250	250	250	578	590	3"	458
100	950	790	480	1465	1390	178	298	793	873	980	280	760	1600	250	250	578	790	3"	458
150	1250	1090	480	1665	1590	178	298	1093	1173	1280	280	760	1800	250	250	578	1090	3"	458
200	1250	1090	480	2115	2040	178	298	1093	1173	1280	280	760	2250	250	250	578	1090	3"	458
250	1250	1090	480	2615	2540	178	298	1093	1173	1280	280	760	2750	250	250	578	1090	3"	458
300	1250	1090	480	3115	3040	178	298	1093	1173	1280	280	760	3250	250	250	578	1090	3"	458
400	1250	1090	480	4115	4040	178	298	1093	1173	1280	280	760	4250	250	250	578	1090	3"	458
L 400	1640	1466	480	3115	3040	178	298	1470	1550	1650	380	860	3170	250	350	678	1430	3"	558
L 500	1640	1466	480	3615	3540	178	298	1470	1550	1650	380	860	3670	250	350	678	1430	3"	558

* 250 mm Non-Woven Cloth Roll

Models	Tank Capacity (L)	Max emulsion flow rate (l/min) **	Max neat oil flow rate (l/min)	Electric Pump Head (bar)	Tot. Installed Power (kW)		Absorbed current		Absorbed current		Weight (Kg)
					50 Hz	60 Hz	230 V - 50 Hz	265 V - 60 Hz	400 V - 50 Hz	460 V - 60 Hz	
Detex 30	51	30	15	0,2	0,29		1,38		0,80		70
Detex 50	167	50	25	0,2	0,29		1,38		0,80		90
Detex 100	287	100	50	0,2	0,50		2,13	2,03	1,23	1,17	135
Detex 150	445	150	75	0,2	0,64		2,48	2,30	1,43	1,33	195
Detex 200	557	200	100	0,2	1,12		4,07	3,72	2,35	2,15	235
Detex 250	656	250	125	0,2	1,32		4,66	4,21	2,69	2,43	275
Detex 300	805	300	150	0,2	1,27		4,15		2,39		285
Detex 400	1050	400	200	0,2	1,59		5,65		2,39		380
Detex L 400	1210	450	225	0,2	1,28	2,38	5,51	7,81	3,17	4,53	nn
Detex L 500	1400	500	250	0,2	1,28	2,38	5,51	7,81	3,17	4,53	nn

** Nominal flow rate data refers to emulsion with a maximum oil concentration of 5% or neat oil with a maximum viscosity of 20cst at 40°C, and with a filter cloth weighing no more than 35g/m². The different characteristics of the liquid to be treated, the type of pollutant and its concentration can affect the performance of the purifier. Our technical department is at your disposal to identify the most suitable solution for your needs.



Decom

Liquid Purification

Combined purifier
for liquid coolants



Decom

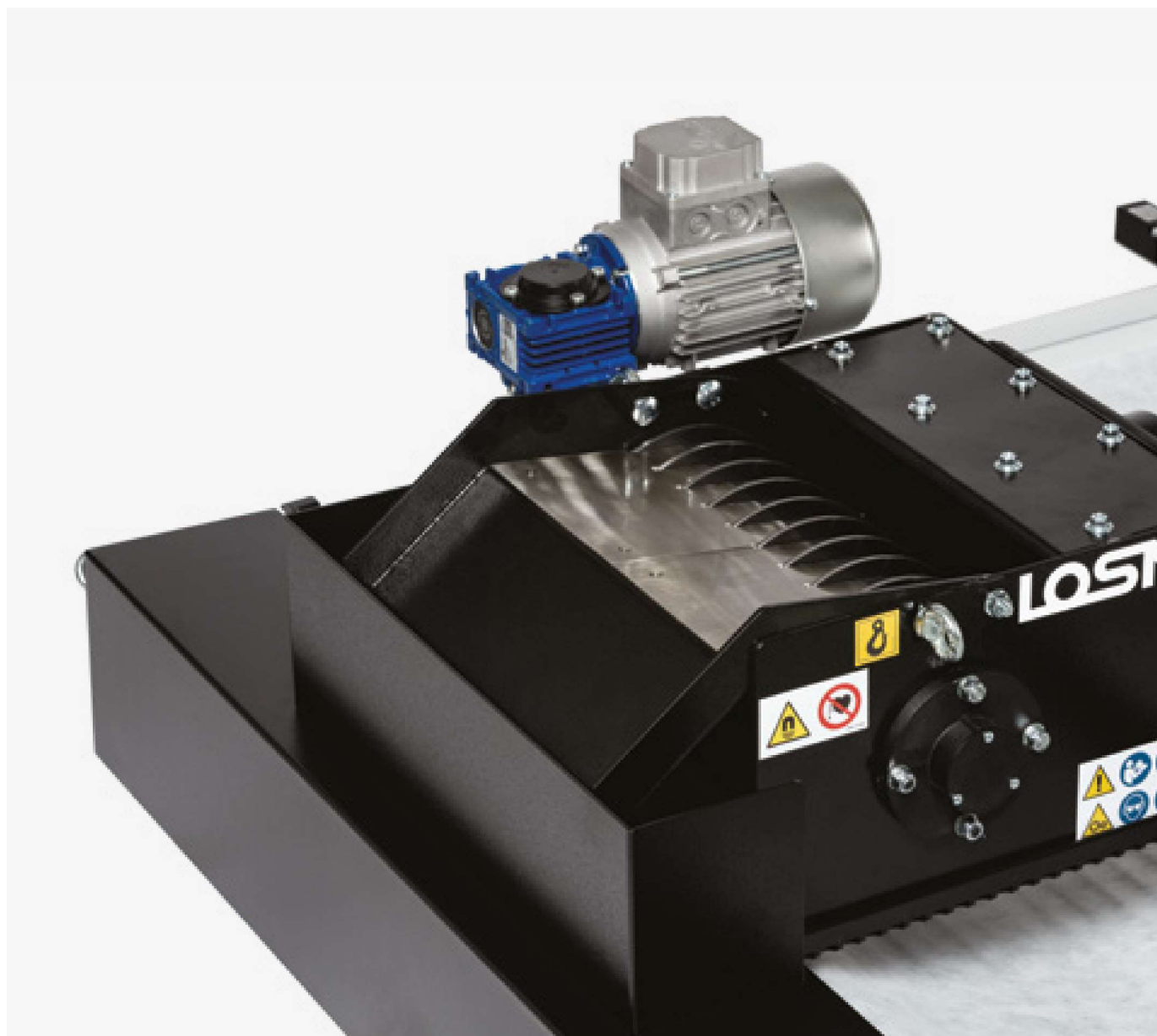
Decom is a combined purifier for liquid coolants that uses filter fabric and a rotating disc magnetic purifier to separate and remove magnetic and non-magnetic polluting particles from neat and emulsified oils.

The degree of filtration is determined by the choice of fabric and varies from 10 to 50 micrometres, ensuring a very high degree of purification.

Decom is capable of purifying 50 to 400 l/min of emulsified oil and 25 to 200 l/min of neat oil.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Operation

The contaminated liquid passes through the magnetic disc pre-filter, which removes the magnetic polluting particles (particularly the large sized ones).

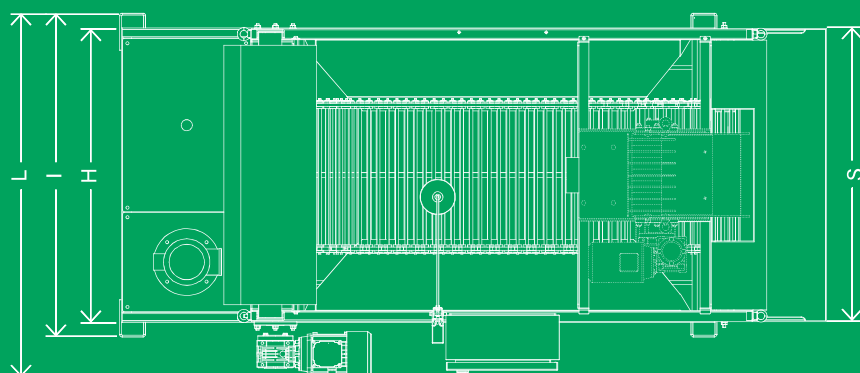
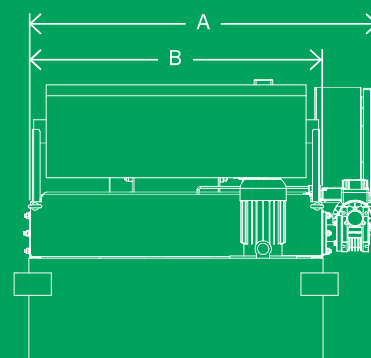
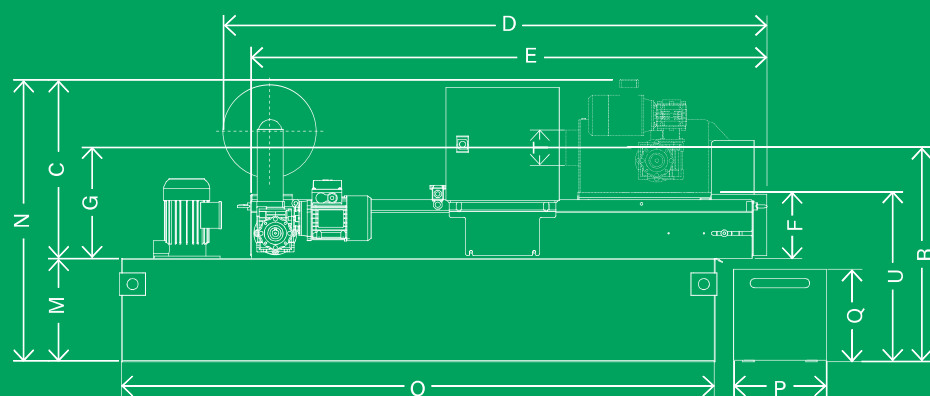
The liquid is then conveyed and distributed over the filter fabric, which retains non-magnetic polluting particles and any small magnetic particles, allowing the clean coolant to flow out.

Magnetic pre-filtration allows the filter fabric to be economised.





Technical Data

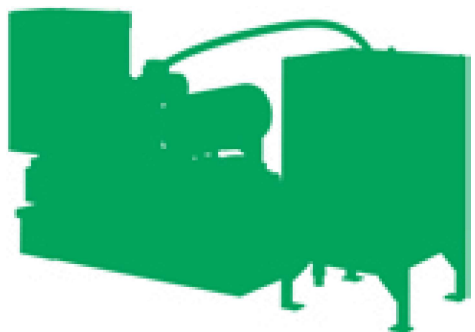
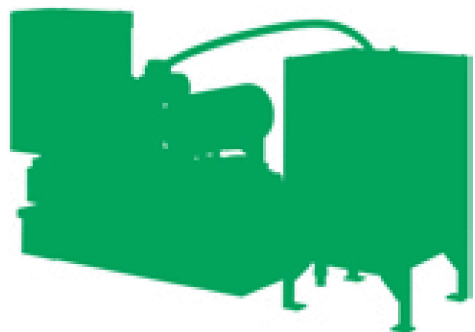


Models	Dimensions (mm)																		
	A	B	C	D *	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	U
Decom 30	630	480	430	815	750	178	298	400	480	630	200	630	825	200	170	500	480	2"	378
Decom 50	750	590	480	1115	1040	178	298	593	673	780	280	760	1250	250	250	578	590	3"	458
Decom 100	950	790	480	1465	1390	178	298	793	873	980	280	760	1600	250	250	578	790	3"	458
Decom 150	1250	1090	480	1665	1590	178	298	1093	1173	1280	280	760	1800	250	250	578	1090	3"	458
Decom 200	1250	1090	480	2115	2040	178	298	1093	1173	1280	280	760	2250	250	250	578	1090	3"	458
Decom 250	1250	1090	480	2615	2540	178	298	1093	1173	1280	280	760	2750	250	250	578	1090	3"	458
Decom 300	1250	1090	480	3115	3040	178	298	1093	1173	1280	280	760	3250	250	250	578	1090	3"	458
Decom 400	1250	1090	480	4115	4040	178	298	1093	1173	1280	280	760	4250	250	250	578	1090	3"	458
Decom L 400	1640	1466	480	3115	3040	178	298	1470	1550	1650	380	860	3170	250	350	678	1430	3"	558
Decom L 500	1640	1466	480	3615	3540	178	298	1470	1550	1650	380	860	3670	250	350	678	1430	3"	558

* 250 mm Non-Woven Cloth Roll

Models	Tank Capacity (L)	Max emulsion flow rate (l/min) **	Max neat oil flow rate (l/min)	Electric Pump Head (bar)	Tot. Installed Power (kW)		Absorbed current		Absorbed current		Weight (Kg)
					50 Hz	60 Hz	230 V - 50 Hz	265 V - 60 Hz	400 V - 50 Hz	460 V - 60 Hz	
Decom 30	51	30	15	0,2	0,29		1,38		0,80		70
Decom 50	167	50	25	0,2	0,29		1,38		0,80		90
Decom 100	287	100	50	0,2	0,50		2,13	2,03	1,23	1,17	135
Decom 150	445	150	75	0,2	0,64		2,48	2,30	1,43	1,33	195
Decom 200	557	200	100	0,2	1,12		4,07	3,72	2,35	2,15	235
Decom 250	656	250	125	0,2	1,32		4,66	4,21	2,69	2,43	275
Decom 300	805	300	150	0,2	1,27		4,15		2,39		285
Decom 400	1050	400	200	0,2	1,59		5,65		2,39		380
Decom L 400	1210	450	225	0,2	1,28	2,38	5,51	7,81	3,17	4,53	nn
Decom L 500	1400	500	250	0,2	1,28	2,38	5,51	7,81	3,17	4,53	nn

** Nominal flow rate data refers to emulsion with a maximum oil concentration of 5% or neat oil with a maximum viscosity of 20cst at 40°C, and with a filter cloth weighing no more than 35g/m2. The different characteristics of the liquid to be treated, the type of pollutant and its concentration can affect the performance of the purifier. Our technical department is at your disposal to identify the most suitable solution for your needs.



FILTERJET

Liquid Purification

Liquid purifier
for water jet cutting systems



Filterjet

Filterjet is a purifier specifically designed for the filtration of water used in water jet systems (water cutting) contaminated by abrasive and cut material. The purifier is manufactured in AISI 304 stainless steel.

The degree of filtration that can be obtained is determined by various factors, including the type of filters used, the material processed, etc. It is possible to reach a filtration degree up to 3μ with the complete series of filters.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.





Operation

- The coolant contaminated with impurities arriving by gravity from the water jet system is loaded on the Demag magnetic filter with self-cleaning drum, made of AISI 304 stainless steel (if magnetic material is processed) or distributed by the trough on the fabric filter (if non-magnetic material is processed).
- The filter fabric, duly chosen for its weight and degree of filtration, retains the polluting particles and allows the liquid to flow into the collecting tank below.
- The tissue progressively accumulates polluting particles, increasing the degree of filtration until it becomes clogged. At this point, the liquid is no longer able to pass through the filter fabric, so it rises to level, lifting the float, which activates the microswitch and controls the advancement of the conveyor and the consequent replacement of the consumed fabric with the new one.
- The consumed fabric is collected in a special tank located at the head of the purifier, while the pre-filtered liquid collected in the tank below is sent by means of the special electric pump, controlled by two electromechanical levels, to the 3 μ superfiltration cartridge, which is also inserted in an AISI 304 stainless steel tank and from which the superfiltered liquid is discharged by gravity.
- The 3 micron superfiltration cartridge is fed by a pump whose start and stop is controlled by two independent electromechanical levels. The hydraulic connection unit, equipped with a pressure switch, gives indication of cartridge clogging/replacement.



Advantages

ONLY AVAILABLE IN STAINLESS STEEL VERSION

Filterjet is produced in stainless steel, particularly suitable for the purification of water or corrosive or aggressive liquids.

COST EFFICIENCY

The fabric filtration guarantees a very high degree of purification. Different types of filter fabrics are available.

SUPERFILTRATION

Superfiltration of cutting liquids used in water cutting. Replacement superfiltration cartridges are available.



Optional

1. Stainless steel Demag

2. Stainless steel Detex

3. Delivery pump

4. Electrical Equipment

5. Stainless steel booster tank

6. 3 micron superfiltration

1. Stainless steel Demag

Features:

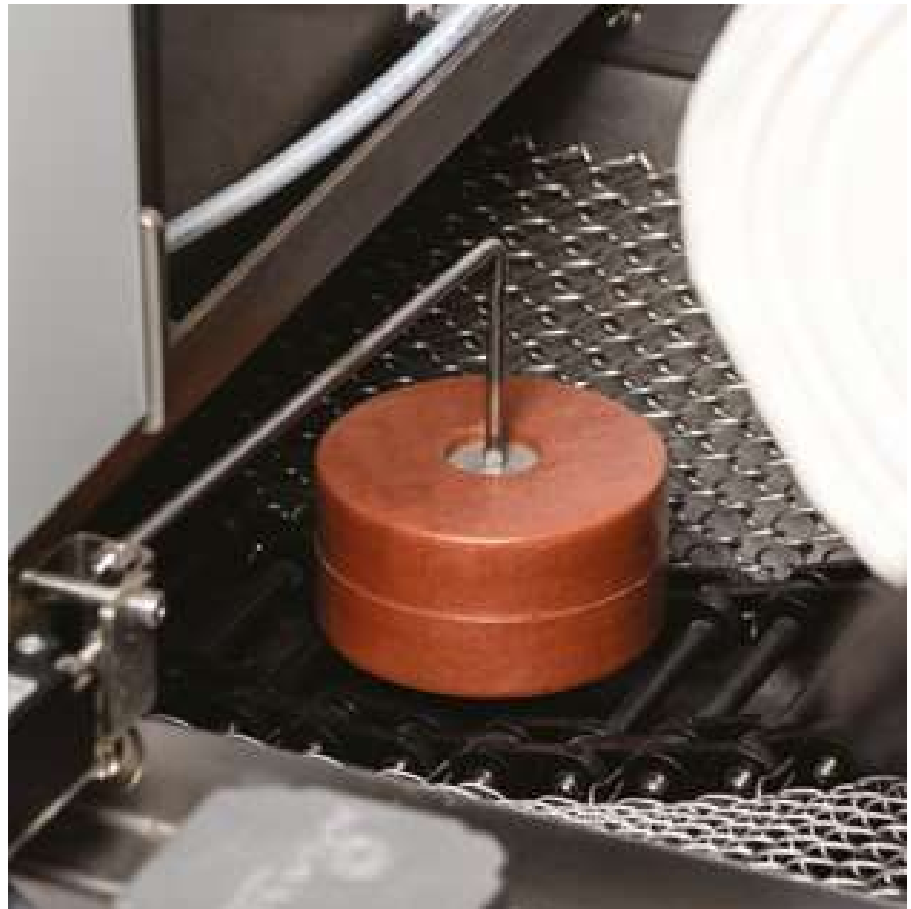
- AISI 304 stainless steel sheet frame
- 3" sleeve for loading liquid to be purified
- Shaft with multiple disc magnetic rotor
- Type NMRV 30/40 worm gear motor ratio $i=1/600$ motor Kw.0.12 V.230/400 Hz.50
- AISI 304 stainless steel tilt-adjustable chute for sludge discharge
- AISI 304 stainless steel sludge scraper blade



2. Stainless steel Detex

Features:

- AISI 304 stainless steel sheet frame
- Transmission shaft with AISI 304 stainless steel pinions and pulleys
- Return shaft with AISI 304 stainless steel pinions and slat base supporting pulleys
- Conveyor for fabric support and transfer with special chain in Hostaform
- AISI 304 stainless steel jet-breaker diffuser for coolant distribution
- Float unit for filter fabric feeding
- Type NMRV 40 worm gear motor ratio $i=1/100$ motor Kw.0,12 V.230/400 Hz.50 for conveyor movement
- Filter fabric roll
- AISI 304 stainless steel electrowelded sheet metal purified liquid collecting tank
- 60 L capacity complete with sludge collecting tank; dimensions 424x825xh.200



3. Delivery pump

For pre-filtered liquid supply to the superfilter cartridge.



4. Electrical Equipment

The system can be supplied with:

- Electrical panel for complete system management
- Terminal box with all components wired (it must then be completed with electrical panel or interfaced to the machine tool).



5. Stainless steel booster tank

Allows the superfiltered liquid to be collected at 3 μ and then transferred for disposal, by means of an electro-level pump, even at long distances.

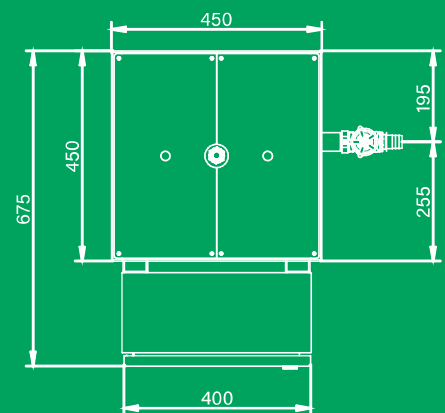
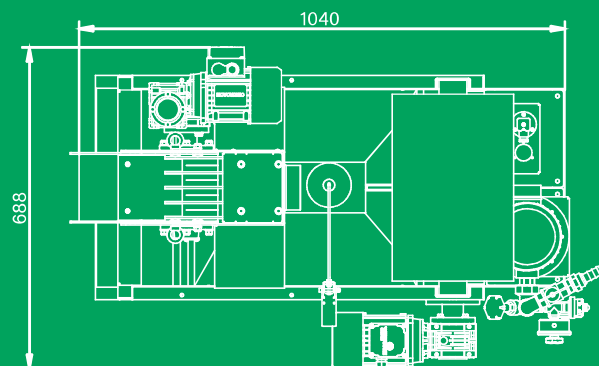
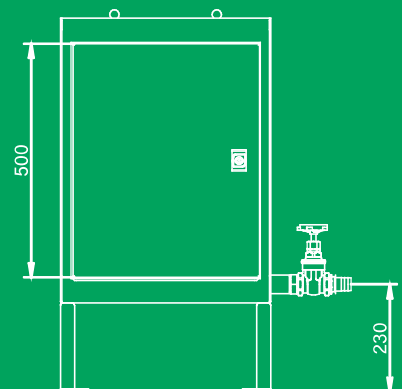
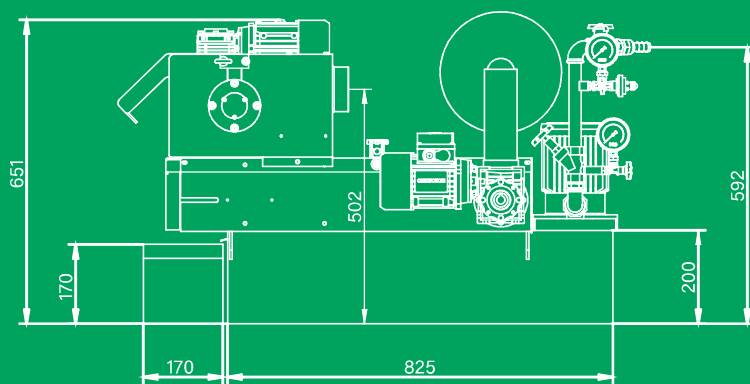


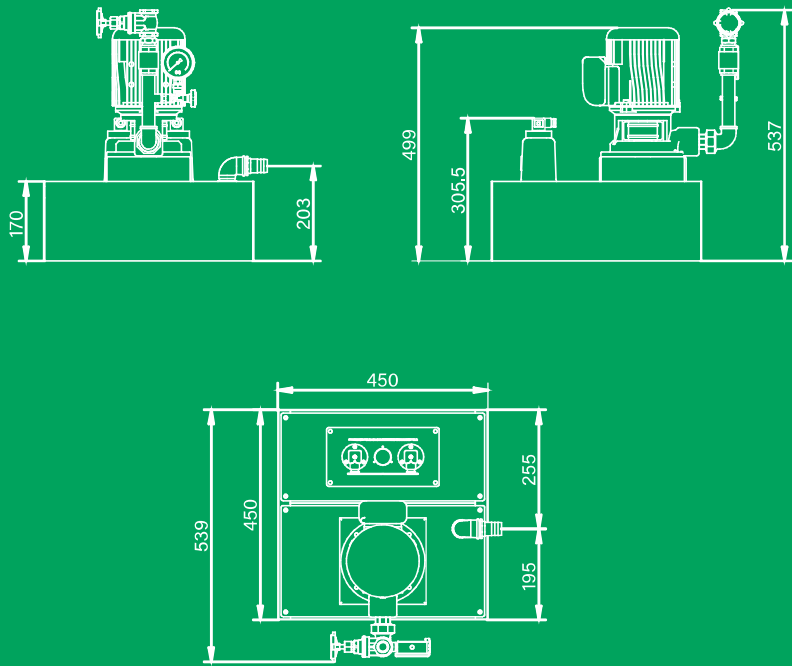
6. 3μ superfiltration

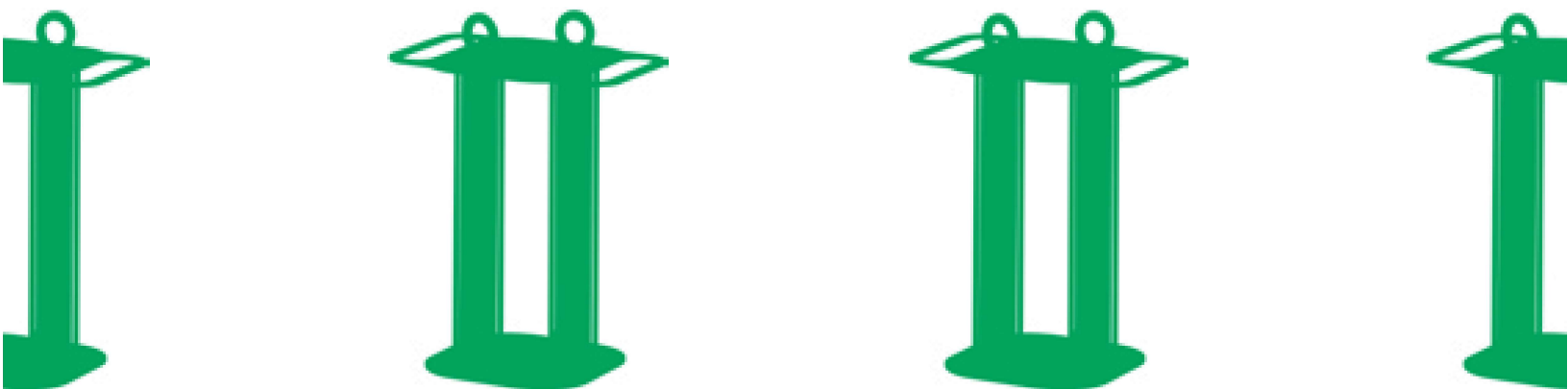
The 3μ superfiltration cartridge inserted in a special AISI 304 stainless steel sheet tank complete with gravity outlet. It can be connected to an additional transfer station (for very distant drains), or directly to the disposal manifold.



Dimensions



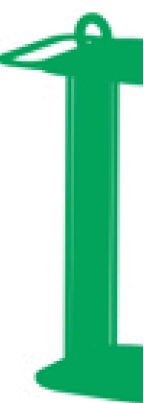
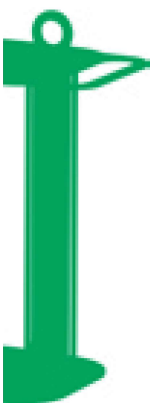




Magneto

Liquid Purification

Ultra-fine magnetic
separation system



Magneto

Magneto is an ultra-fine magnetic separation system that can be easily adapted and customised thanks to its simplicity.

It is made entirely of Aisi 304 stainless steel and equipped with permanent neodymium magnetic elements with a force of 5000 Gauss.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.





Operation

Filtration is performed by placing Magneto in the clean coolant tank in an area close to the pump to allow the fluid to pass through.

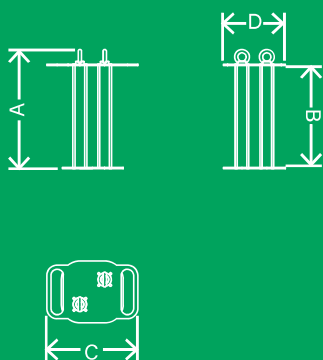
High levels of filtration are achieved by channelling the liquid longitudinally, with simple bulk-heads.

Cleaning Magneto is very simple: the bars are removed from their seat and the sludge is discharged into a special container.

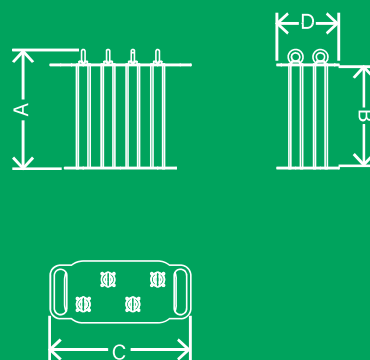


Technical Data

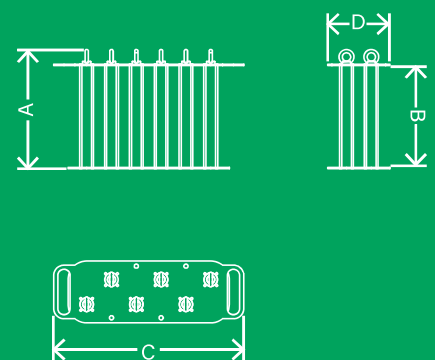
MAGNETO 250/2



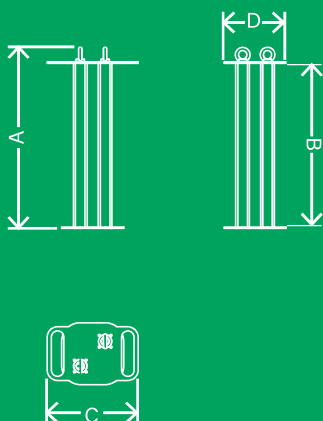
MAGNETO 250/4



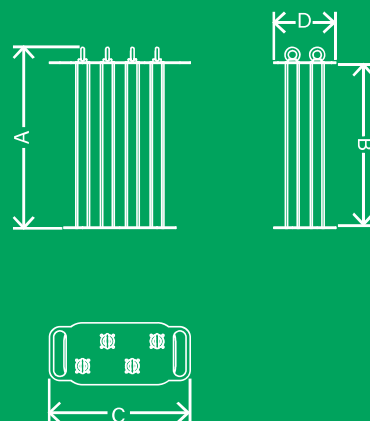
MAGNETO 250/6



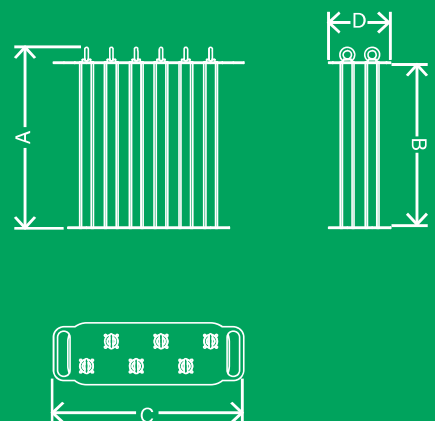
MAGNETO 400/2



MAGNETO 400/4



MAGNETO 400/6

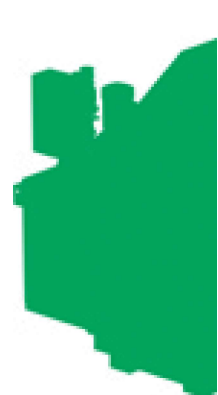


1. 250 Series

250 SERIES	Dimensions (mm)				Indicative flow rate (l/h)	Indicative Tank capacity (l)	Weight (Kg)
	A	B	C	D			
Magneto 250/2	300	250	220	150	50 - 150	100 - 500	5
Magneto 250/4	300	250	340	150	50 - 150	100 - 500	10
Magneto 250/6	300	250	460	150	50 - 150	100 - 500	15

2. 400 Series

400 SERIES	Dimensions (mm)				Indicative flow rate (l/h)	Indicative Tank capacity (l)	Weight (Kg)
	A	B	C	D			
Magneto 400/2	450	400	220	150	150-300	500 - 1000	15
Magneto 400/4	450	400	340	150	150-300	500 - 1000	20
Magneto 400/6	450	400	460	150	150-300	500 - 1000	25



Master

Liquid Purification

High-flow purifiers



Master

Master is a series of high-efficiency, gravity-operated high-flow purifiers using TNT fabric as the filter medium.

The Master series is available in four models, capable of handling 200 to 1000 l/min of neat oil and 400 to 2000 l/min of water-based emulsion, polluted by metal and non-metal particles.

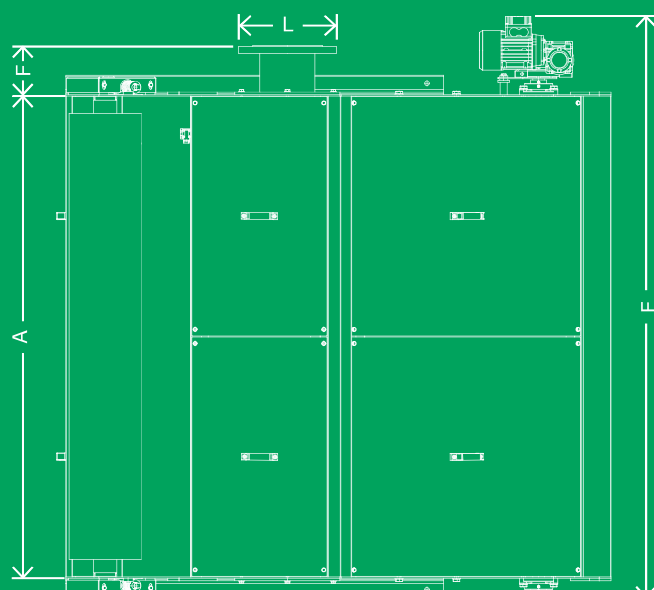
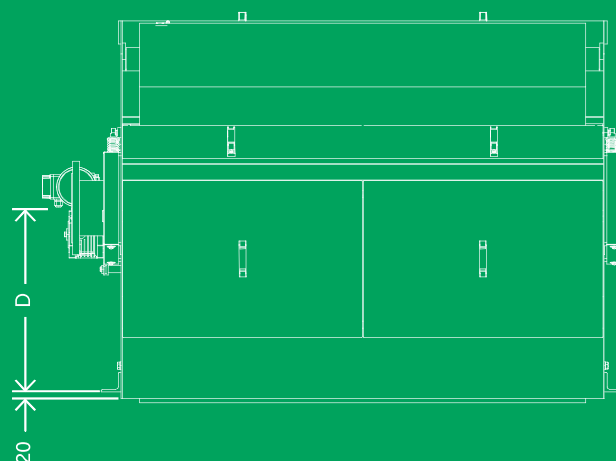
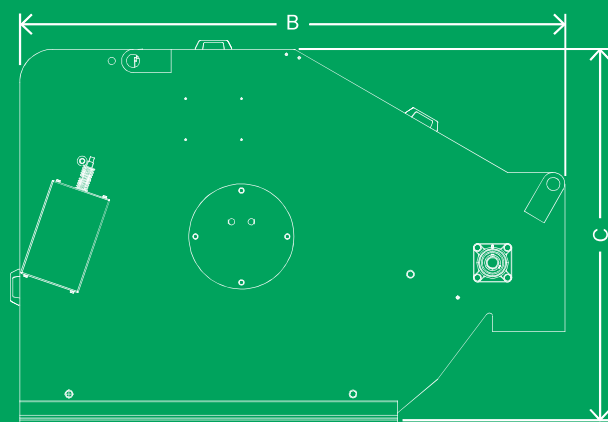
Master has a very simple operation and offers stable, consistent performance over time. This type of filter is suitable for filtering the coolant liquid used in many industrial processes: drawing, rolling, polishing, grinding, washing and other industrial processes.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Technical Data





Models	Dimensions (mm)							Weight (kg)
	A	B	C	D	E	F	L	
Master AB 700	773	1660	1130	560	1020	185	DN150 PN16	1200
Master AB 1000	1073	1660	1130	560	1020	185	DN150 PN16	1500
Master AB 1400	1473	1660	1130	560	1020	185	DN150 PN16	1800
Master AB 2000	2093	1660	1130	560	1020	185	DN150 PN16	2100

Models	Flow rate l/min *			
	Roughing grinding (emulsion)	Finishing grinding (oil)	Drawing (emulsion)	Washing machines, chip removal machines (emulsion)
Master AB 700	400	200	from 400 to 800	800
Master AB 1000	600	300	from 800 to 1200	1200
Master AB 1400	800	400	from 1200 to 1600	1600
Master AB 2000	1200	600	from 1600 to 2000	2000

* Nominal flow rate data refers to emulsion with a maximum oil concentration of 5% or neat oil with a maximum viscosity of 20cst at 40°C, and with a filter cloth weighing no more than 35g/m². The different characteristics of the liquid to be treated, the type of pollutant and its concentration can considerably affect the performance of the purifier. Our technical department is at your disposal to identify the most suitable solution for your needs.

Medio Master

Medio Master is a high industrial liquid purifier, available in three models, capable of filtering 200 to 400 l/min of neat oil and 400 to 800 l/min of water-based emulsion, polluted by metal and non-metal particles.

Medio Master allows excellent filtration of coolants and lubricants according to different requirements, thanks to the use of a disposable filter medium.

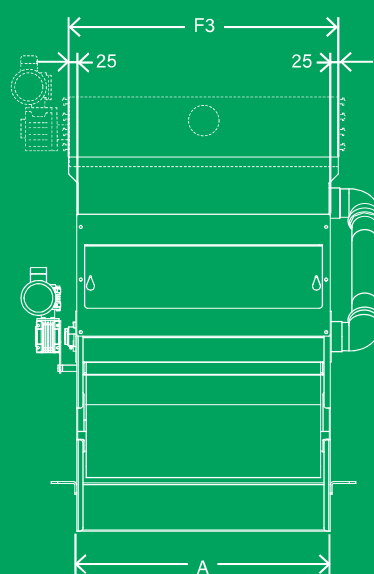
It is suitable for many industrial processes such as drawing, grinding, rolling, washing, polishing, etc.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Technical drawing showing the front view of the ESD 600 cabinet. The drawing includes dimensions: B (total height), H (height to top edge), Ø18 (hole diameter), 500 (width), and 359 (width of the rightmost section). A small inset shows a detail of the top right corner.





Models	Dimensions (mm)					Weight of filter only (kg)	Fabric width (mm)
	A	B	Filter Housing				
			F1	F2	F3		
Medio Master 600	800	960	900	850	850	250	740
Medio Master 800	1100	1260	1200	850	1150	270	1040
Medio Master 1200	1500	1660	1600	850	1550	310	1440

Models	Flow rate l/min *			
	Roughing grinding (emulsion)	Finishing grinding (oil)	Drawing (emulsion)	Washing machines, chip removal machines (emulsion)
Medio Master 600	400	200	from 400 to 600	600
Medio Master 800	600	300	from 600 to 800	800
Medio Master 1200	400	400	from 800 to 1200	1200

* Nominal flow rate data refers to emulsion with a maximum oil concentration of 5% or neat oil with a maximum viscosity of 20cst at 40°C, and with a filter cloth weighing no more than 35g/m². The different characteristics of the liquid to be treated, the type of pollutant and its concentration can considerably affect the performance of the purifier. Our technical department is at your disposal to identify the most suitable solution for your needs.

Mini Master

Mini Master is available in three models, capable of purifying 60 to 200 l/min of neat oil and 100 to 400 l/min of water-based emulsion, polluted by metal and non-metal particles.

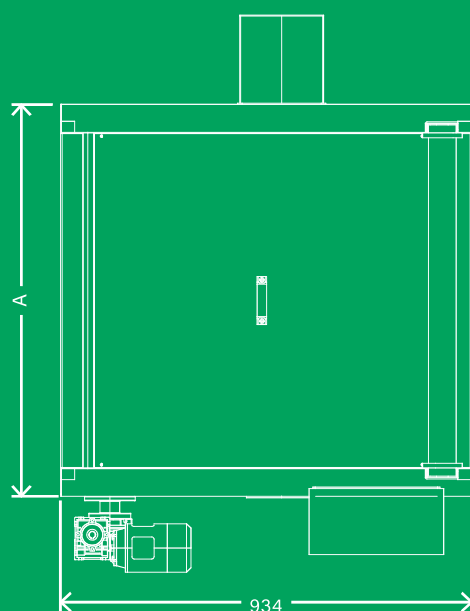
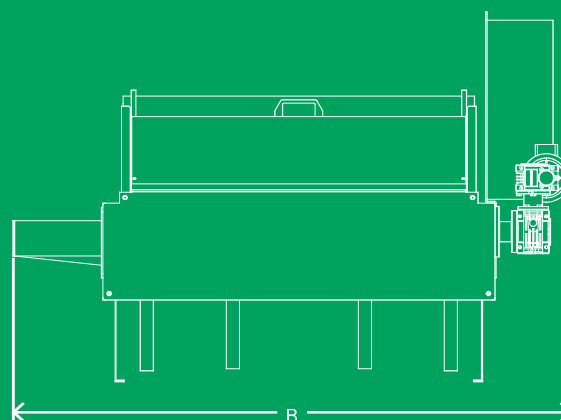
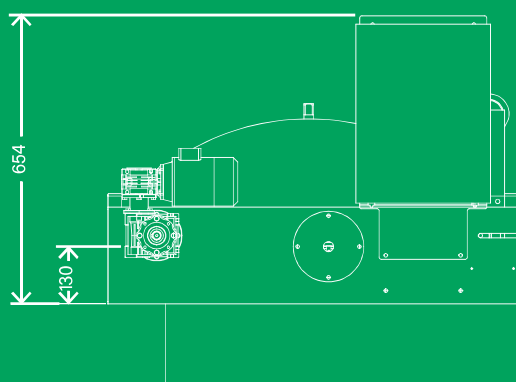
Excellent filtration capacity thanks to the disposable filter medium that can be modified as required. Characterised by a very small footprint, it is suitable for many industrial processes such as drawing, grinding, rolling, washing, polishing, etc.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Technical Data





Models	Dimensions (mm)		Weight (kg)	Fabric width (mm)
	A	B		
Mini Master M	590	950	140	460
Mini Master L	890	1250	260	760
Mini Master XL	1190	1550	400	1060

Models	Flow rate l/min *			
	Roughing grinding (emulsion)	Finishing grinding (oil)	Drawing (emulsion)	Washing machines, chip removal machines (emulsion)
Mini Master M	100	60	from 100 to 150	150
Mini Master L	200	100	from 200 to 300	300
Mini Master XL	300	160	from 300 to 450	450

* Nominal flow rate data refers to emulsion with a maximum oil concentration of 5% or neat oil with a maximum viscosity of 20cst at 40°C, and with a filter cloth weighing no more than 35g/m². The different characteristics of the liquid to be treated, the type of pollutant and its concentration can considerably affect the performance of the purifier. Our technical department is at your disposal to identify the most suitable solution for your needs.

Micro Master Heavy Duty

Micro Master is a series of high-efficiency, gravity-operated, high-flow coolant lubricant purifiers using non-woven fabric as the filter medium. The Micro Master series is available in two models with flow rates from 60 to 100 l/min of neat oil and from 100 to 300 l/min of water-based emulsion, polluted by metal and non-metal particles. Micro Master is reliable and guarantees stable, consistent operation over time.

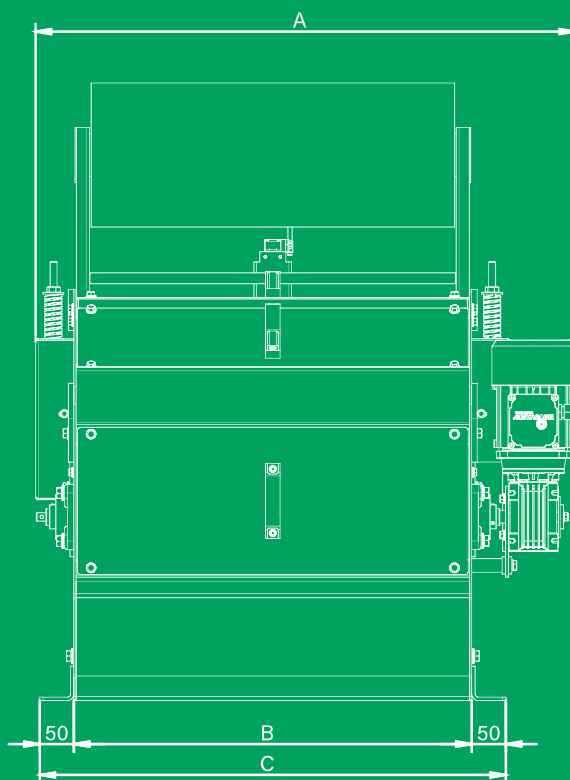
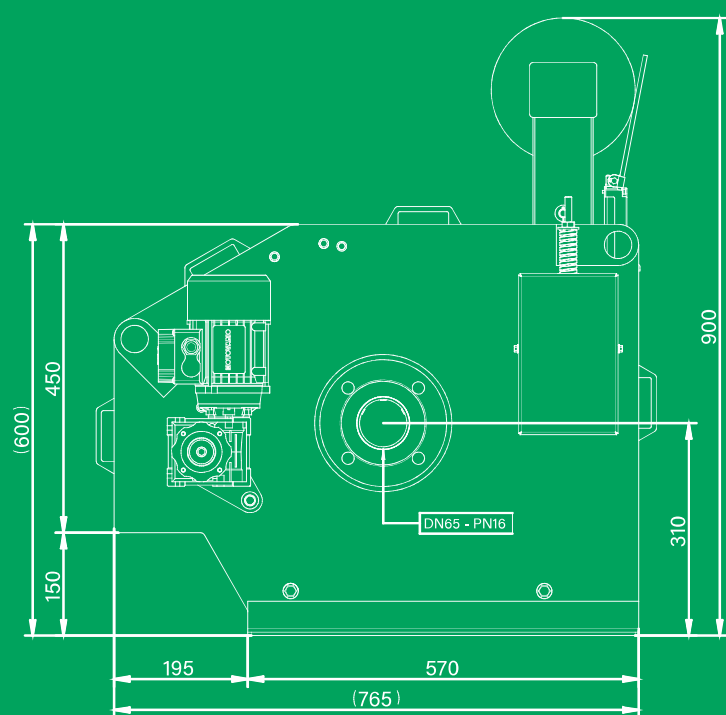
This type of filter is particularly suitable for heavy-duty machining, machining with light alloys (aluminium, brass, etc.), applications with neat oils and 24-hour machining.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Technical Data





Models	Dimensions (mm)	
	A	B
Micro Master 100	790	580
Micro Master 200	990	780

Models	Flow rate l/min *			
	Roughing grinding (emulsion)	Finishing grinding (oil)	Drawing (emulsion)	Washing machines, chip removal machines (emulsion)
Micro Master 100	100	60	from 100 to 150	150
Micro Master 200	200	100	from 200 to 300	300

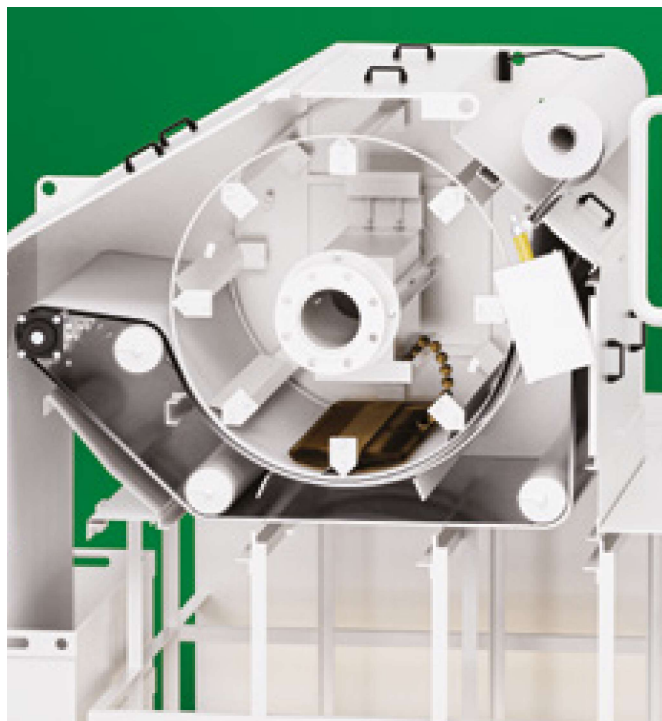
* Nominal flow rate data refers to emulsion with a maximum oil concentration of 5% or neat oil with a maximum viscosity of 20cst at 40°C, and with a filter cloth weighing no more than 35g/m². The different characteristics of the liquid to be treated, the type of pollutant and its concentration can considerably affect the performance of the purifier. Our technical department is at your disposal to identify the most suitable solution for your needs.

Operation

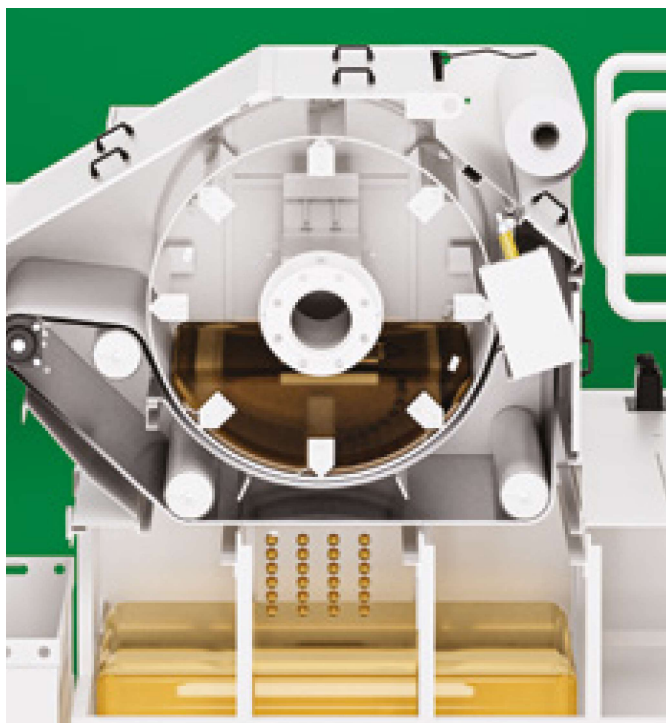
- In the initial phase the fabric, stretched inside the filter, is completely clean. The dirty liquid entering must pass through it into the lower tank, where it deposits the pollutants on its surface. The clean liquid then passes into the lower part where it finds the drain opening and falls into the collection tank. During this phase, the system is stationary and the belt does not advance. The pollutant material that settles there forms the actual filter layer, which in many applications can be up to 10 mm thick.
- In the intermediate phase, the filter fabric becomes dirty and its permeability is reduced because the dirty liquid continues to deposit pollutants on its surface. And so the liquid level starts to rise. The degree of filtration improves due to the thickness of sludge deposited. The system is also stationary in this phase.
- In the final phase, the liquid level has reached its maximum and the best possible degree of filtration has been achieved. The longer the filter runs in this condition, the better the average filtration will be. The system is also stationary in this phase. When the fabric is completely clogged and the liquid can no longer pass through, the regeneration cycle is started. The gear motor starts the system rotation and the dirty filter fabric is shifted with insertion of the clean one, the permeability is restored, the level drops and the system returns to the intermediate phase, starting the cycle again.

Example sequence taken from product operation video

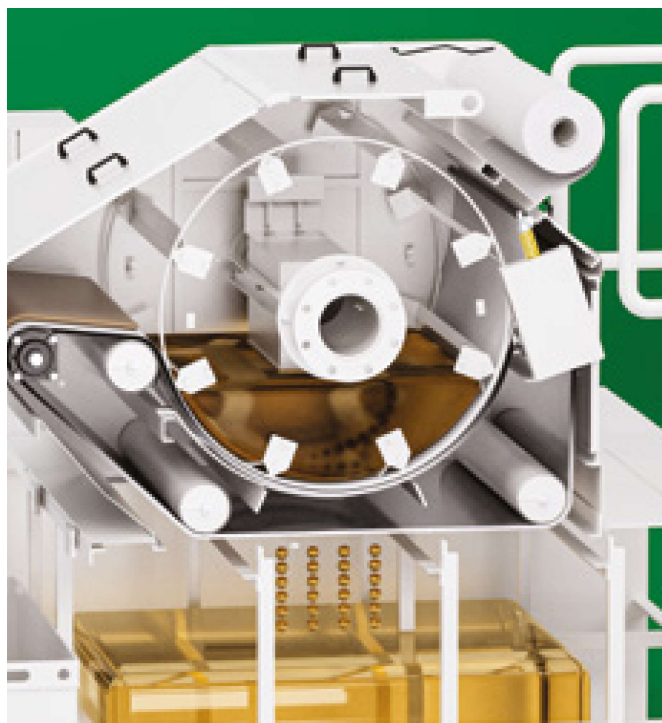
1.



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Advantages

CHAIN SYSTEM AND SIDE SEALING DISCS

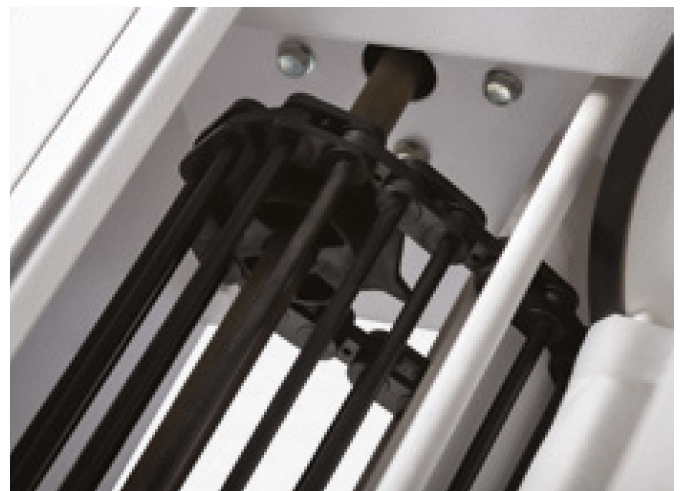
All Master series models are equipped with a corrugated metal chain which, thanks to the side sealing discs, guarantees a perfect seal of the dirty liquid in the filter section.

CUSTOMISABLE TO CUSTOMER REQUIREMENTS

The filters in this series use a disposable filter medium, which allows the degree of filtration to be varied by changing only the type of filter, always achieving excellent results.

SMALLER SIZE

Compared to flatbed filters with the same flow rate, the Master range has a considerably smaller footprint and achieves a better degrees of filtration.





Optional

1. DEMAG

Magnetic rotating disc pre-filtration system for separating magnetic pollutant particles from coolant.

2. SKIM

Eliminator of superficial oils allowing the quality of coolants to be maintained for a long time and eliminates odours generated in the presence of anaerobic bacterial flora.

3. ELECTRICAL PANEL

For supplying all utilities, controlling and managing all signals.

4. PUMPS

For clean liquid delivery from 0.1 bar to 100 bar.

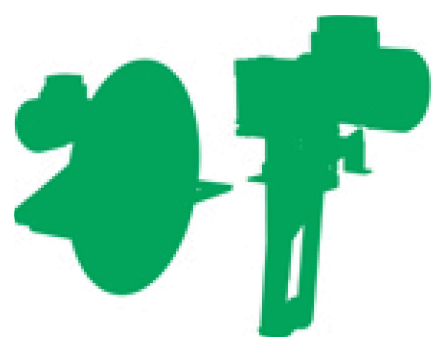
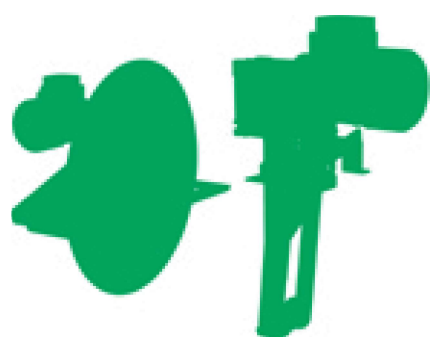
5. CONTAINMENT TANK

To collect the clean liquid to be returned to the machine tool.

6. BOOSTER TANK

To collect dirty liquid for filter supply.

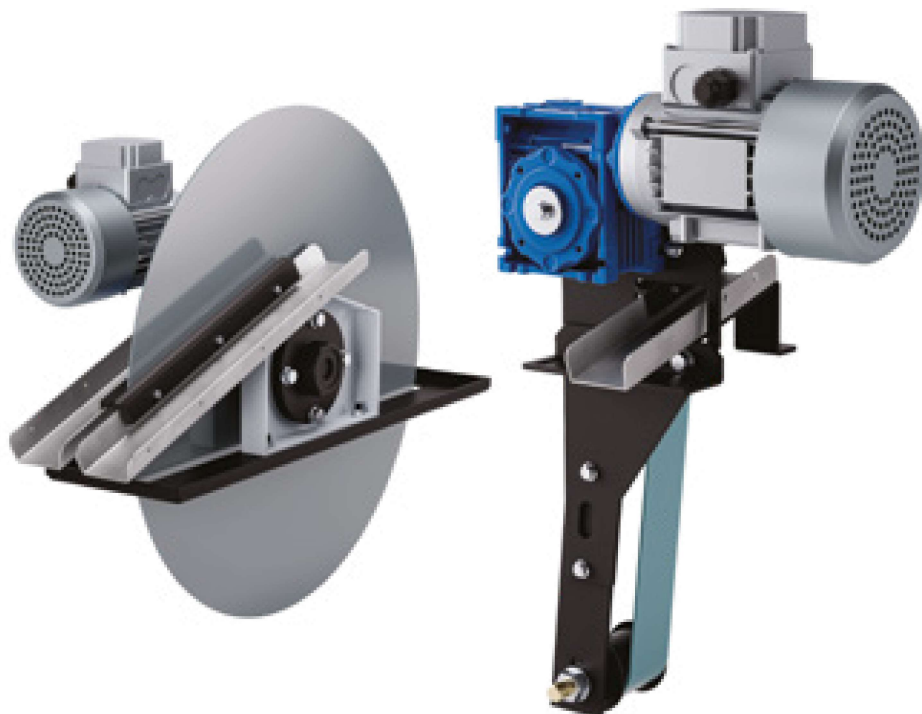




Skim

Liquid Purification

Eliminator of superficial oils



Skim

Skim is an eliminator of superficial oil, suitable to be used on every kind of basin or tank, thanks to its shape and materials used. Skim is available in disc (Skim-D) or belt (Skim-N) versions.

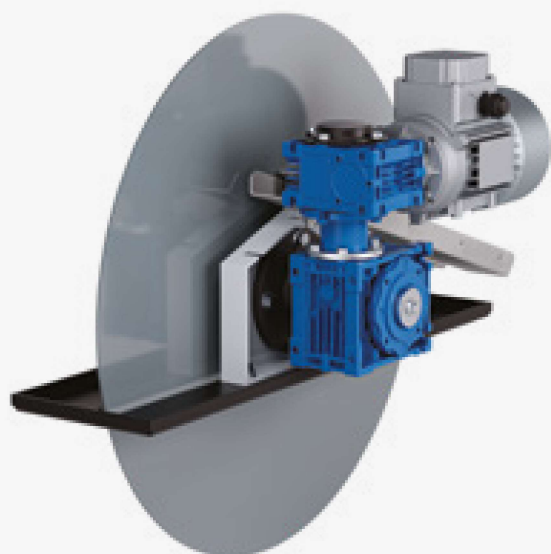
The latter version is more suitable where there is little space and in cases of high liquid level fluctuations.

Skim removes the veil of light products that are not miscible with water from the surface of coolants, creating a barrier that prevents air from coming into contact with the emulsion and encourages the formation of anaerobic-type bacterial flora.

The use of Skim therefore enables the elimination of bad odours and maintains the quality of coolant for a long time.

Losma guarantees that each purifier is individually tested through rigorous control procedures.

A quality and functional test certificate is issued for each unit.



Operation

The disc or belt, immersed in the liquid, rotates and by adhesion drags the pollutants adhering to it outwards. As it rotates, the disc or belt encounters two scrapers with a rubber edge that remove everything that adheres to it and, with appropriate channels, convey it outward.

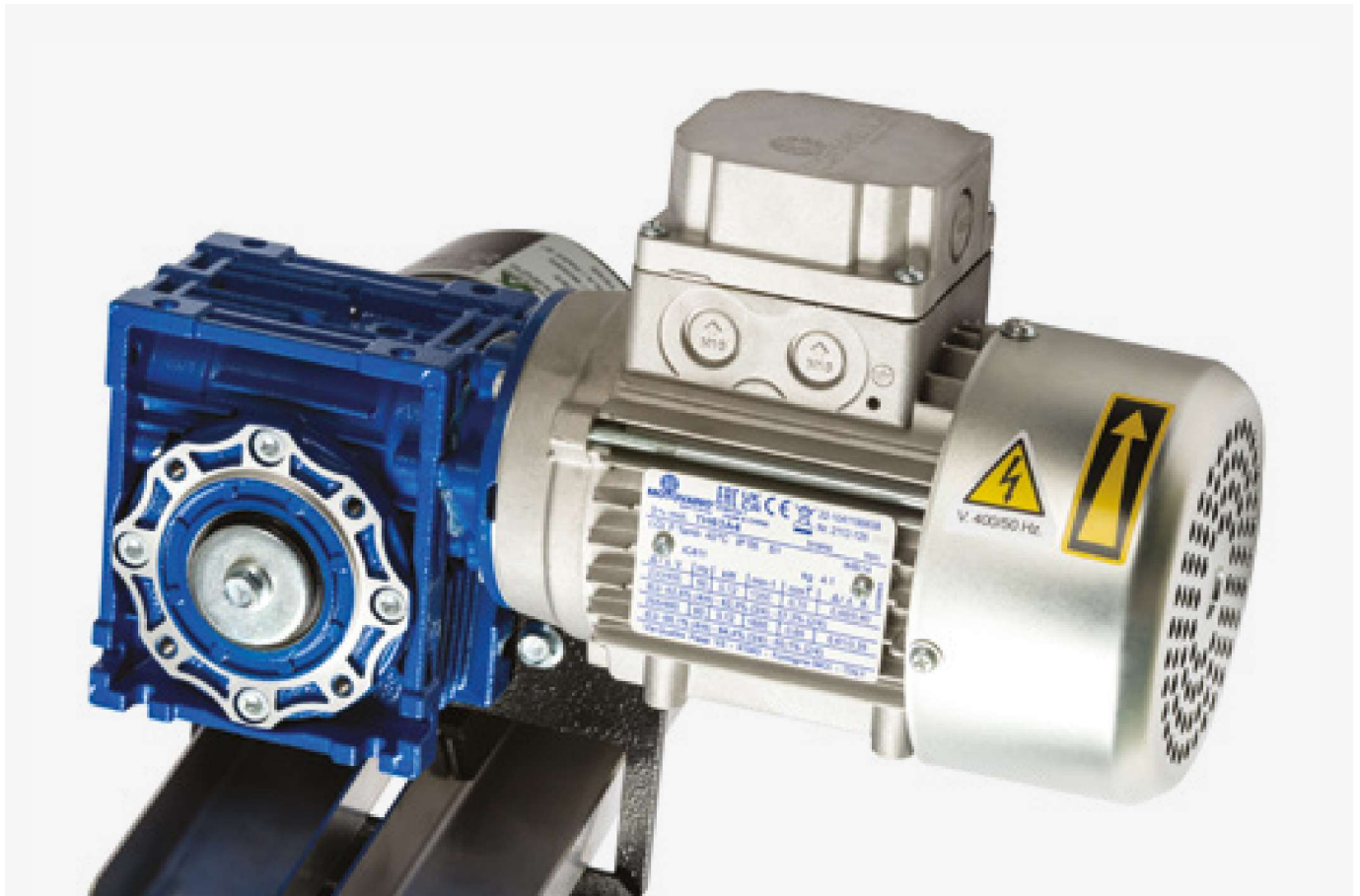
It is possible to equip Skim with an electrical command and control panel that can set timed operating cycles.



Advantages

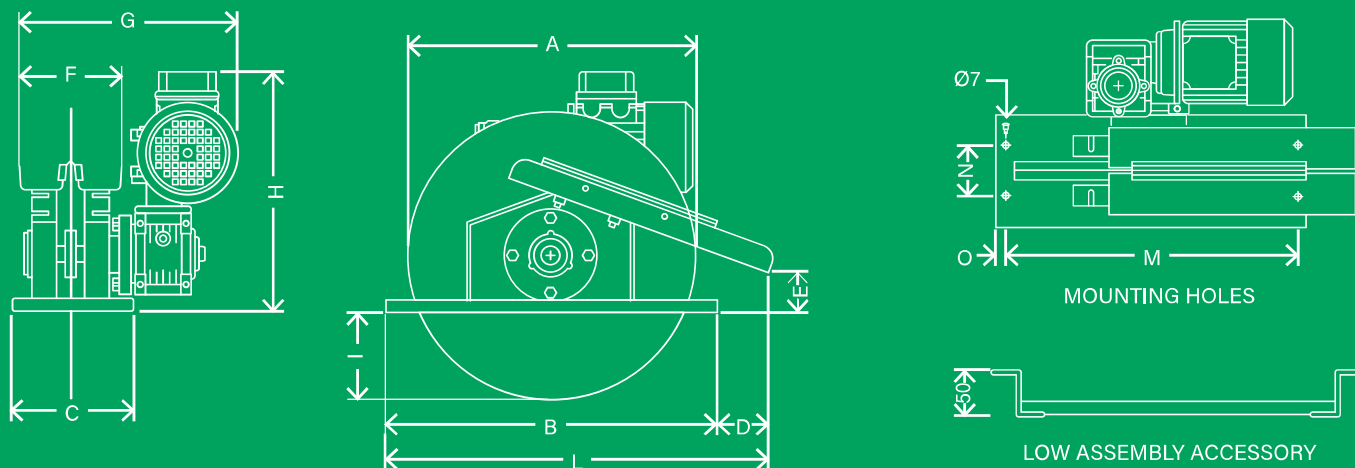
VERSATILITY AND EASY MAINTENANCE

Thanks to its wide range of accessories, Skim can be positioned on the edge of the tank, on the cover, recessed or on an internal structure. The extreme simplicity of construction limits maintenance to just a few operations. Checking the wear of the scrapers and periodic cleaning of the drainage channels keeps the system in perfect working order.

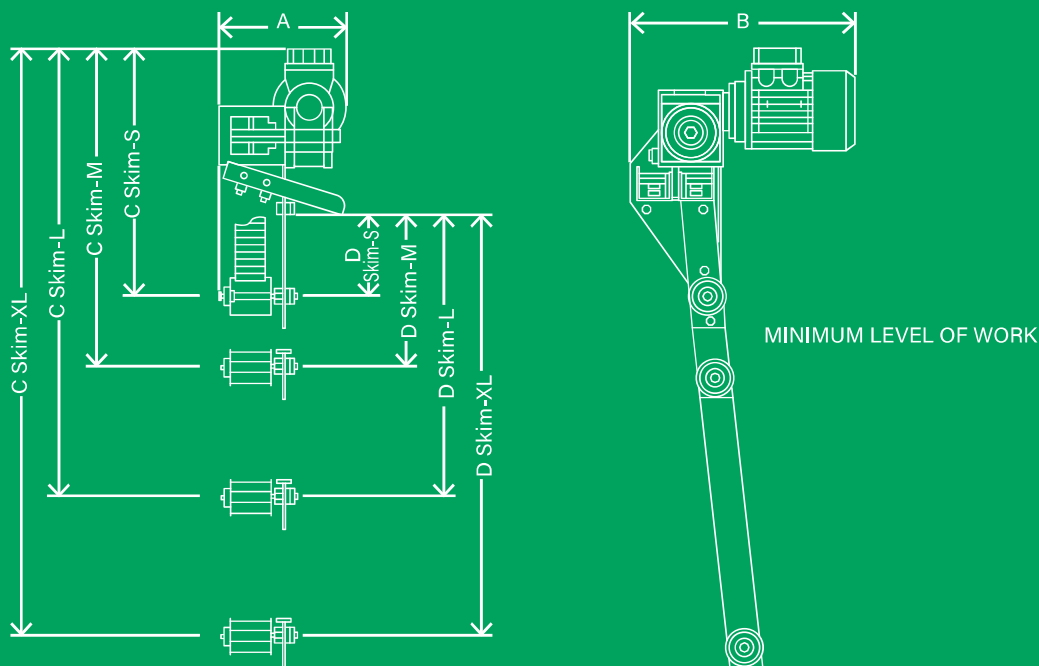


Technical Data

SKIM-D



SKIM-N



1. Skim-D

Models	Dimensions (mm)													Maximum oil extraction per hour (l/h)	Weight (Kg)	Power (kW) 50 Hz / 60 Hz
	A	B	C	D	E	F	G	H	I	L	M	N	O			
Skim-D ₁	350	400	150	60	50	120	280	300	80	462	374	66	13	13	15	0,12
Skim-D ₂	500	550	150	52	28	120	280	300	180	612	524	66	22	22	18	0,12
Skim-D ₃	600	650	150	78	0	120	280	300	230	740	624	66	35	35	20	0,12

2. Skim-N

Models	Dimensions (mm)			Immersion depth D (mm)	Weight (Kg)	Power (kW) 50 Hz / 60 Hz
	A	B	C			
Skim-N _S	205	356	441	126	15	0,12
Skim-N _M	205	356	554	238	18	0,12
Skim-N _L	205	356	982	666	20	0,12
Skim-N _{XL}	205	356	1220	930	22	0,12



SPRING

Liquid Purification

Self-cleaning drum filtration system



Spring

Spring is a self-cleaning drum filtration system with a fixed metal filter cloth, suitable for removing magnetic and non-magnetic particles from neat and emulsified oils.

It is available in 9 models with flow rates from 25 to 1000 l/min neat oil and 50 to 2,000 l/min emulsion. Drum filtration efficiency can be customised according to customer requirements.

Spring series self-cleaning filters are suitable for many types of machine tools such as: machining centres, deep drilling, transfers, grinding machines, lathes, machining with special high-pressure tools and combined machines.

This type of self-cleaning filter is especially suitable in the mechanical engineering and automotive industries, where there are machining operations involving chip removal with tools, abrasion removal, deformation and washing.

Losma guarantees that each purifier is individually tested through rigorous control procedures. A quality and functional test certificate is issued for each unit.





Spring Compact

Spring Compact is a self-cleaning drum filtration system capable of treating from 100 to 5000 l/min of neat oil or emulsion. Drum filtration efficiency can be customised according to customer requirements.

Spring Compact has the special feature that it only processes the amount of coolant required by the machine; the clean liquid collection tank is welded as a single block with the filter. Spring Compact works in real time, eliminating sludge deposits in the tank and thus guaranteeing zero deposits at the bottom of the machine.

Given the characteristics of the filter, the system is designed and sized to the customer's specific requirements.

Spring series self-cleaning filters are suitable for many types of machine tools such as: machining centres, deep drilling, transfers, grinding machines, lathes, machining with special high-pressure tools and combined machines.

This type of self-cleaning filter is especially suitable in the mechanical engineering and automotive industries, where there are machining operations involving chip removal with tools, abrasion removal, deformation and washing.

Losma guarantees that each purifier is individually tested through rigorous control procedures. A quality and functional test certificate is issued for each unit.



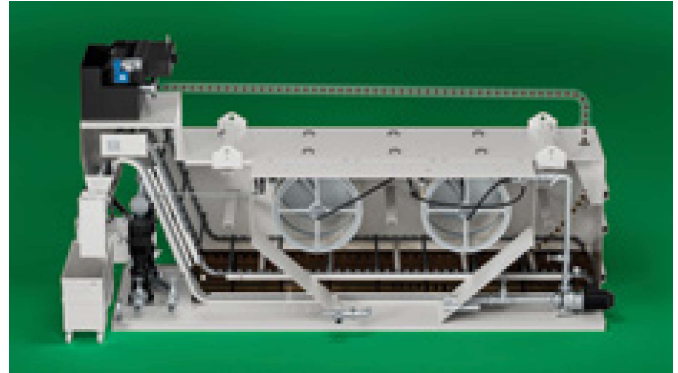
Operation

The Spring and Spring Compact operating principle involves three phases:

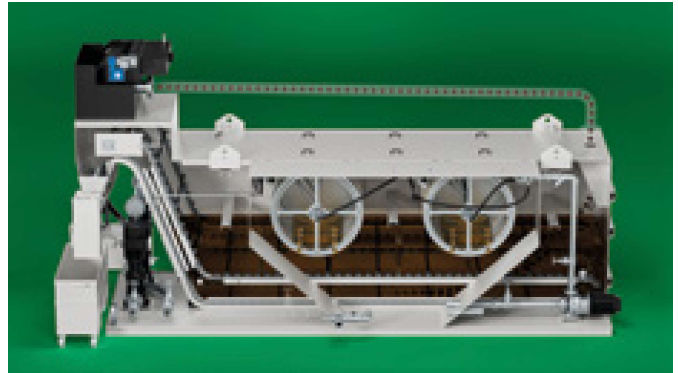
- The filter cloth covering the drum is perfectly clean. The dirty liquid passes through it, depositing the polluting parts, and it finds the drain opening while passing inside it. Here, the liquid falls into the clean collection tank, from where it is then sent back to the machine tools. During this phase, the drum does not rotate and the dredging system is stationary. The pollutant material that settles on the cloth forms the actual filter layer, which can be up to 10-15mm thick.
- The filter cloth becomes dirty and the liquid level rises. The dirty liquid continues to deposit pollutants on the surface of the drum, which does not rotate and the dredging system is stationary. The degree of filtration improves due to the thickness of the sludge deposited on the cloth.
- When the cloth clogging cycle is complete and the liquid can no longer pass through, the best possible degree of filtration is achieved. The longer the filter runs in this condition, the better the average filtration will be. When the liquid in the clean tank reaches the minimum level, the Autoclean cycle starts automatically and the drum rotates. At the end of this phase, the cleaning cycle starts again from the beginning.

Example sequence taken from
product operation video

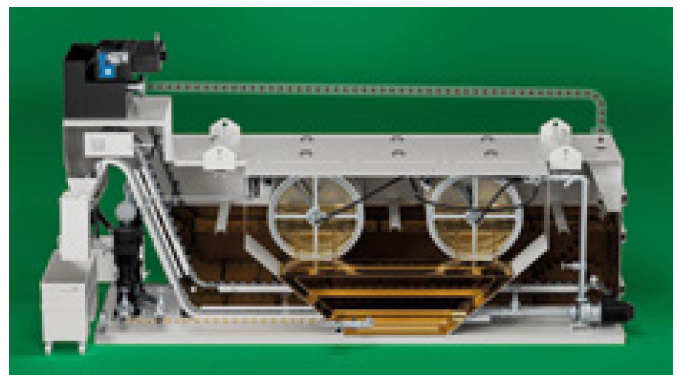
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Advantages

PERMANENT FILTER MATERIALS

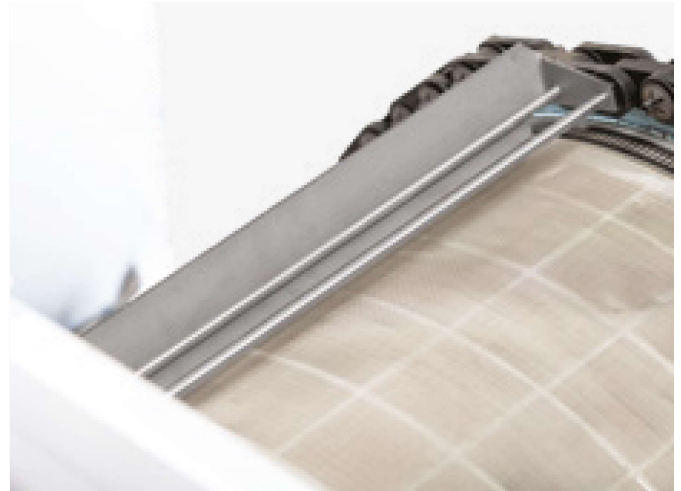
The Spring system uses a metal filter cloth which is cleaned by the Autoclean system. In this way, no consumable materials are used, significantly reducing maintenance and waste disposal costs.

AUTOCLEAN SYSTEM

This is an automatic cleaning system for the wire cloth used for filtering liquids. Inside the filter is a sensor that rotates the drum when the maximum filter cloth clogging level is reached. During the rotation, a counter-current jet system washes the wire mesh, removing the residue while the dredging system scrapes the sludge from the bottom of the tank, transporting it to the outside.

DREDGING SYSTEM

It is used for the evacuation of filtered and decanted sludge; it can also be in a magnetic version for ferro-magnetic residues.





LOSMA[®]

SPRING

Optional

1. DEMAG

Magnetic rotating disc pre-filtration system for separating magnetic pollutant particles from coolant.

2. MAGNETIC DREDGING PLATE

To facilitate the evacuation of ferro-magnetic swarf.

3. ELECTRICAL PANEL

For supplying all utilities, controlling and managing all signals

4. MUD COMPACTOR

It is used to reduce the volume of sludge for disposal and to reduce the liquid it contains. However, the level of compaction that can be achieved depends on the type of sludge, the type of liquid and many other factors such as cycle times. Volume and moisture reduction is achieved by squeezing with static load. It has a volume reduction efficiency of 40% to 20% and liquid reduction efficiency of 30% to 10%.

5. DELIVERY PUMPS

For clean liquid delivery from 0.1 bar to 100 bar.

6. SKIM

Eliminator of superficial oils allowing the quality of coolants to be maintained for a long time and eliminates odours generated in the presence of anaerobic bacterial flora.

7. CONTAINMENT TANK

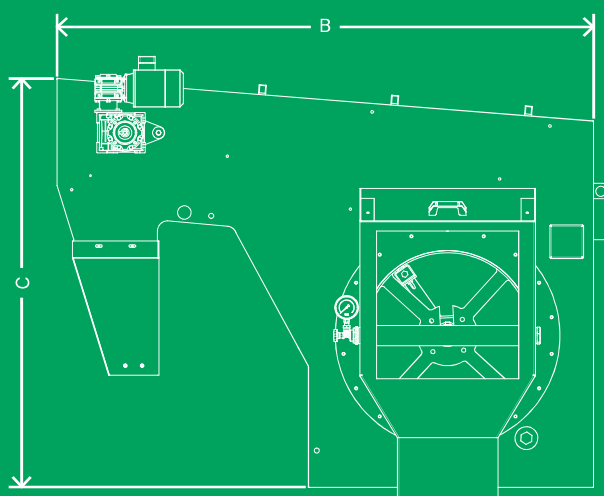
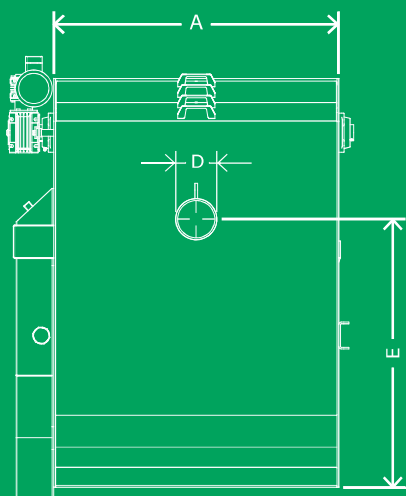
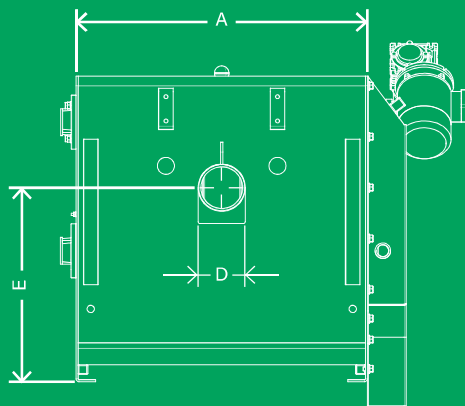
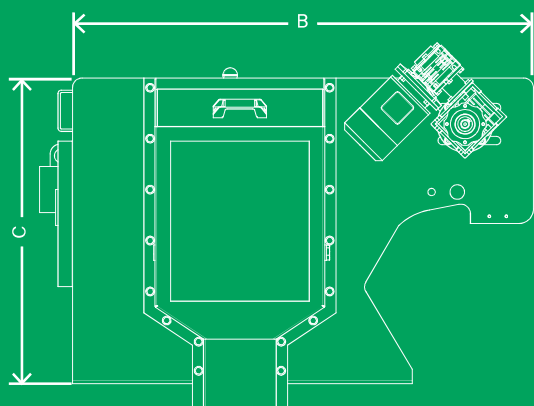
To collect the clean liquid to be returned to the machine tool.

8. BOOSTER TANK

To collect dirty liquid for filter supply.



Technical Data



Models	Dimentions (mm)				
	A	B	C	D	E
F1	400	950	630	2"	400
F2	500	950	630	2"	400
F3	600	950	630	3"	400

Master	Max emulsion flow rate (l/min)	Max neat oil flow rate (l/min)	Tank capacity (l)	Weight (filter only)
F1	50	25	170	100
F2	100	50	300	120
F3	150	75	460	140

Models	Dimentions (mm)				
	A	B	C	D	E
F4	600	1600	1220	4" G	800
F5	850	1600	1220	4" G	800
F6	1100	1600	1220	DN125-PN16	800
F7	1450	1600	1220	DN125-PN16	800
F8	1100	2400	1520	DN125-PN16	1100
F9	1450	2400	1520	DN125-PN16	1100

Master	Max emulsion flow rate (l/min)	Max neat oil flow rate (l/min)	Tank capacity (l)	Weight (filter only)
F4	300	150	1150	260
F5	600	300	2000	290
F6	900	450	3000	310
F7	1200	600	4000	350
F8	1600	800	5500	650
F9	2000	1000	7000	850

* Nominal flow rate data refers to emulsion with a maximum oil concentration of 5% or neat oil with a maximum viscosity of 20cst at 40°C, and with a filter cloth with a nominal filtration degree of 100μ. The different characteristics of the liquid to be treated, the type of pollutant and its concentration can considerably affect the performance of the purifier. Our technical department is at your disposal to identify the most suitable solution for your needs.

Centralised System





Pilot Plant

CONTINUOUS MONITORING ENERGY SAVINGS PREDICTIVE MAINTENANCE

To provide an integrated environmental sanitation system that constantly monitors the pollution parameters of the entire production site through air quality detectors distributed throughout the plant.

In short, this is the main objective of the Green Factory Life project, the result of the Losma Spa technical and design partnership with Fae Technology and Ma-El.

The goal is **to minimise Co₂ levels and eliminate spores, moulds, odours, carcinogens, bacterial** and viral loads in the air during processing cycles.

Integration with IoT sensors and the predictive models developed ensure greater plant efficiency, high levels of energy savings, and fully predictive and automated maintenance.

Research on suitable materials and technologies conducted in 2022 led the team **to create a pilot plant green factory.**

The entire air purification system fitted with detectors was installed at Ma-El Srl in Presezzo, near Bergamo. Ma-El Srl manufactures moulds and equipment for the cold working of metals.

1. PLANT MANAGEMENT INTERFACE

A programmable control interface remotely manages the various suction areas along the plant. The control interface can self-calibrate the system based on the air data. Moreover, end-users can keep track of the system's warnings and notifications and remotely manage the plant's predictive maintenance.

Can also be managed and programmed remotely.

1.



2.



3.



2. ARGOS PRO – FILTRATION UNIT

Argos Pro is the core of the technology revolving around the Green Factory project. It consists of a cartridge filtration unit that purifies the oil mists, vapours and fumes of various mechanical processes. It is fitted with a digital display for viewing the main functions and the exclusive "LED Up" system, which can indicate the clogging status of the filter elements via three colours.

F9 Filtration Efficiency (Standard EN ISO 16890 ePM₁₀ 95%).

3. H13 FILTRATION UNIT

After the mechanical filtration of the Argos Pro, the air is also conveyed to an absolute filtration unit, further increasing the degree of filtration.

H13 Filtration Efficiency (Standard EN1822 99.95%).

4. CENTRIFUGAL FAN

The Green Factory LIFE system is equipped with an inverter-controlled fan to optimise energy consumption.

Pilot Plant: maximum flow rate 25,000 m³/h.

Can be sized as required.

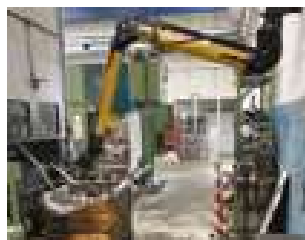
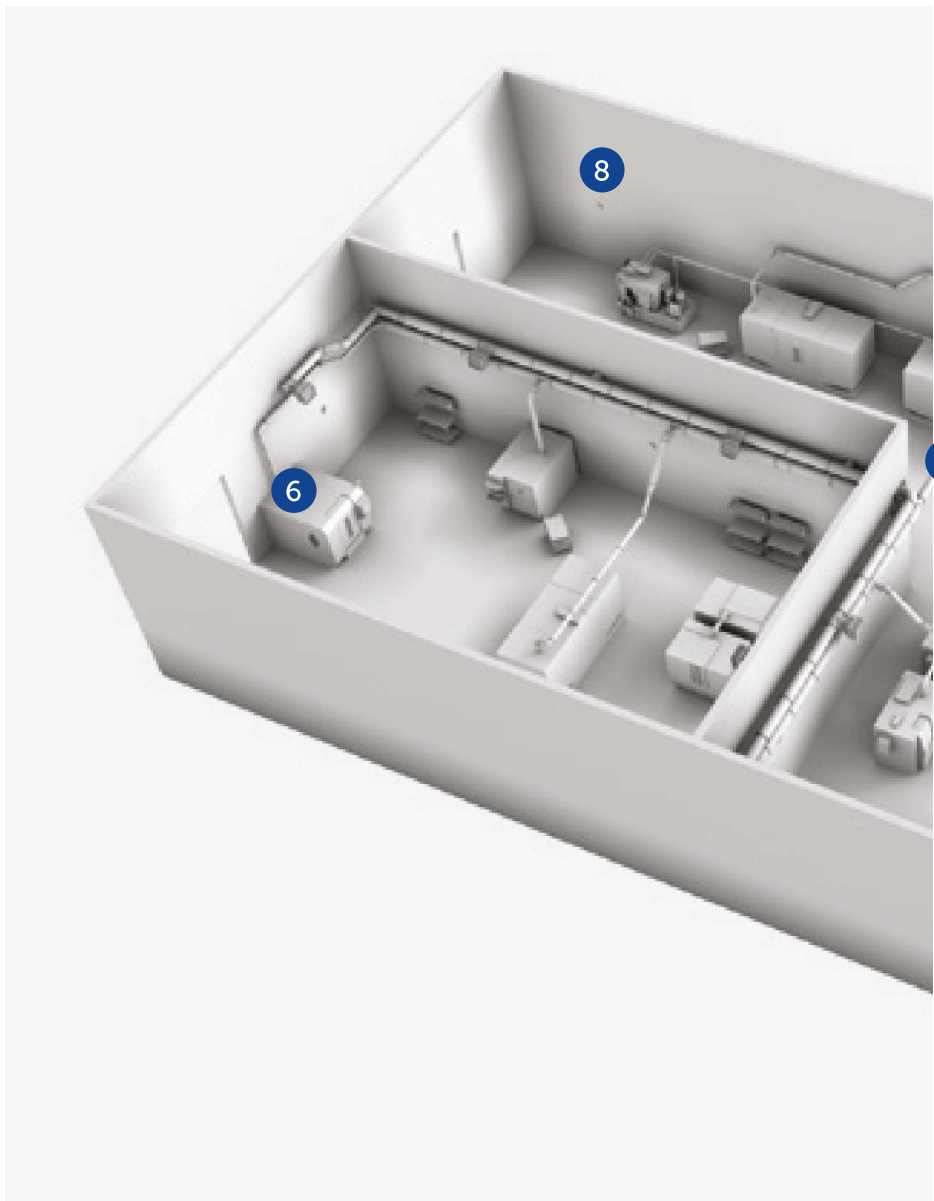
5. AERAILIC SYSTEM

It was possible to size the system, optimising the fluid dynamics, using a sophisticated calculation code.

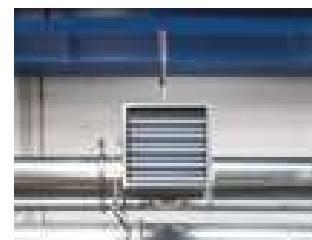
2,000 m² of factory surface area.

600 m of aeraulic ducts.

Can be sized as required.



6.



7.

4.



5.



6. COLLECTION POINTS

On the basis of plant sizing, it was possible to customise the localised collection of the pollutant, generated by the production process.

19 filter points

6 flexible collection arms

Can be sized as required.

7. PCO PURIFICATION SYSTEM

Through the PCO - Photocatalytic Oxidation - filtration system, air is treated by radiating A-band ultraviolet light (at 365 nm) directly onto the special Titanium Oxide filter. This treatment is also effective against viruses, bacteria, and pollutants in plants producing processing waste. A special driver controls and adjusts the power supply of the UVA LEDs in the circuit, switching them off for example when their temperature reaches or exceeds 70 °C.

After 8 hours of treatment, reduction efficiency:

- 92% Total Dusts and Oily Mists
- 99% VOCs (Volatile Organic Compounds)
- 99.9% Bacteria and Viruses (also tested on SARS-Cov-2)

8. AIR QUALITY MONITOR

IoT sensors collect various information in real time from the production environment. The air quality sensors and an IoT (Internet of Things) gateway are part of the sensor network of the Green Factory project and help improve the air quality in work settings. The number of sensors is commensurate with the structure and size of the production plant.

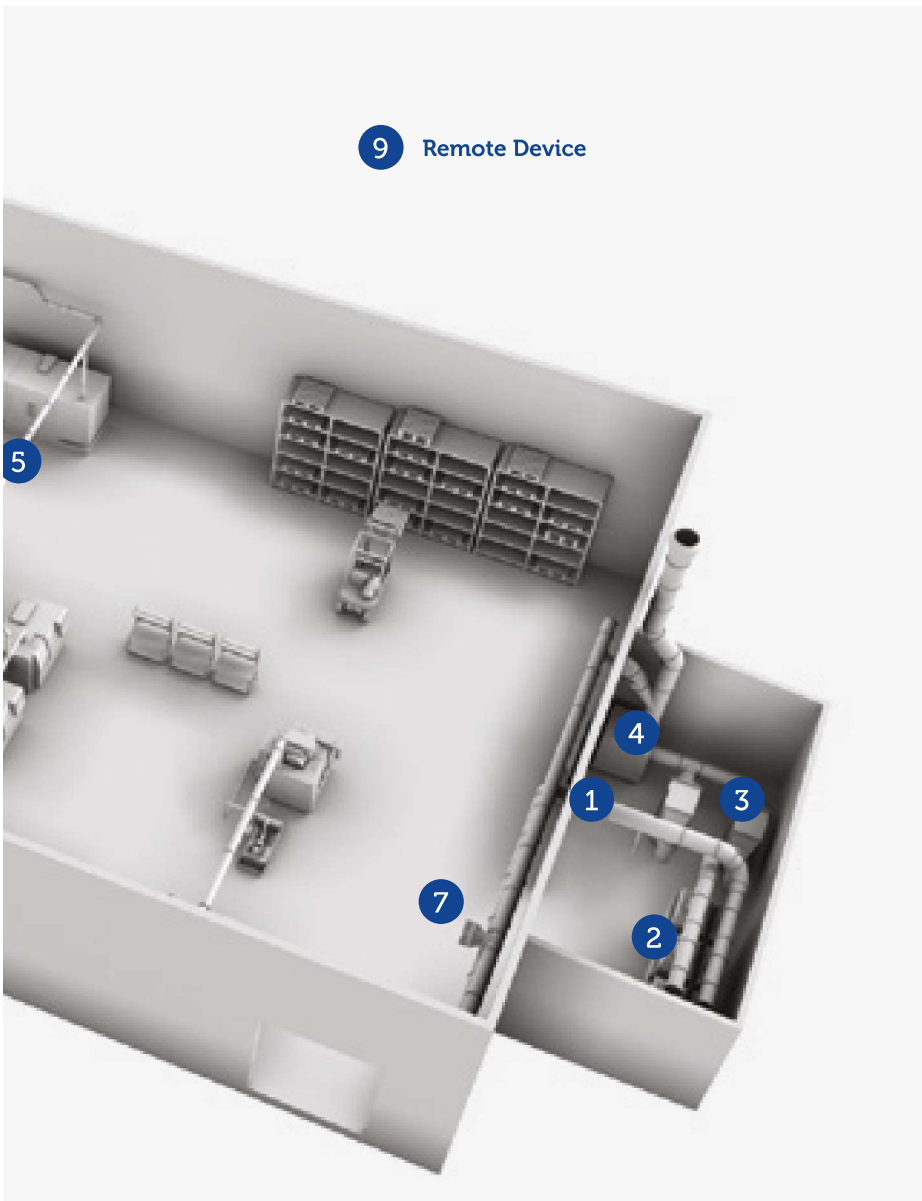
9. IOT PLATFORM

The plant's dashboard displays the data, fully readable by the end user of the system, collected by the IoT Air Quality Monitor sensors to allow users to monitor air pollutant parameters at all times.

Data storage and processing:

- filtration Performance
- Environmental comfort
- PM_s, VOC_s, CO₂

9 Remote Device



8.



9.

OVERALL SYSTEM PERFORMANCE

20.000

m³ of Purified Air

13

**Air re-entry points into the
work environment**

40%

Energy Savings*

*data measured in the autumn/
winter 2022 season

For further information
visit: www.greefactory.life



Coordinator:



Associates:



The Green Factory LIFE project LIFE19 ENV/IT/000185 has received co-funding from the European Union's LIFE program for reducing the effects of climate change and aims to improve air quality inside and outside industrial environments.

DISCLAIMER:

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