



高效油雾净化器 Efficient oil mist collector



什么是智能高效油雾净化器

What is intelligentized highly efficient oil mist collector

切削液在机床车、铣、切削、磨等金属加工过程中起润滑、冷却、清洗等作用，在经过一系列高速切削碰撞摩擦形成大量汽化雾或油雾颗粒，并夹杂着加工中产生的粉尘和各种有害成分复杂微小悬浮体。油雾回收就是针对弥散在空气中的油雾进行收集，经过拦截、过滤并在去除粉尘和复杂微粒的同时，使油雾重新液化凝集为干净的切削液，回收机床中重新利用以及净化空气的一种新型环保回收节能减排装备。

Cutting fluid as lubricating, cooling and cleaning agent during the metal processing such as turning, milling peeling and grinding. The cutting fluid can form tremendous oil mist particles during the high speed processing. The particles could be harmful by mixing with the dust produced in the processing. Oil mist recycling equipment functions to collecting the oil mist diffusing in the air. By intercepting and filtering and getting rid of the dust and particles, the equipment can renew the oil mist into clean fluid and then recycles the fluid. So the equipment is environmental friendly and energy-efficient.

油雾的危害及影响

The hazard of oil mist

- 【对人体的影响】一般加工机在生产中会产生含有多氯联苯等复杂成分的大量油雾、烟雾长期吸入人体后会发生肺，肝脏，咽喉等疾病，并可能诱发慢性眼科疾病，皮肤油疹等。
- 【对生产力的影响】油蒸汽得到及时收集，同时带走设备的热量，降低设备故障，减少设备停机次数。
- 【影响环境、浪费资源】如果油雾中含有粉尘和复杂的有害微粒自然排放，造成周边的环境污染。油雾的散失导致了切削液的大量消耗，降低使用效率，资源浪费。
- 【火灾隐患】油雾的混合物在厂房中弥漫、油蒸汽密度的增加、含量达到一定值，存在着火灾的安全隐患。
- 【对机床的影响】机床内的温度上升，造成电气系统提前绝缘老化增加系统故障率等原因。
- 【To human body】Abundant oil mist consisting harmful polychlorinated biphenyls (PCBS) and so on could cause diseases in lung, liver and throat. It also could induce ophthalmic diseases and skin rash and so on.
- 【To productivity】Collecting the oil vapor timely could take the heat equipment away, thus to reduce the possibility of equipment failure and equipment down times.
- 【To environment and resource】Discharging the oil mist freely could be greatly harmful to the environment. The losing of oil mist leads to great consuming of cutting fluid, thus lowers the efficiency and leads to resource wasting.
- 【A hidden danger as fire hazard】The pervading oil mist could increase the density of oil vapor. It could be a great hidden danger to fire hazard as the density reaches a certain degree.
- 【To the machine】The temperature in the machine increases quickly and leads to the preburning of the electrical system. Thus increases the chance of system failure.



高效油雾净化器 Efficient oil mist collector

智能油雾净化器具有以下特点 Specialties of the series of oil mist collector:

- 高效智能油雾净化器采用多级多层过滤原理，一级过滤器捕集 $\geq 20\mu\text{m}$ 的油雾，二级过滤器捕集 $\leq 2\mu\text{m}$ 的油雾，三级过滤器捕集 $\leq 1-0.1\mu\text{m}$ 的油雾。后端可选配高效过滤器主要收集在加工过程中的烟雾；
 - 易于安装，每台回收器均可直接安装在机床上、支架上，拆装方便；
 - 维修简单、安全，无火花危险及易损构件，即使连接着吸尘软管，也可以更换滤网；
 - 隐蔽式叶轮装置，使用十分安全；
 - 可以捕集各种水漆漆油烟、雾状物和粉尘，可捕集平面磨床、无心磨床等产生的切削，可用于电火花机床、高速数控机床、高效齿轮加工机床、焊接加工产生的烟雾废气等各类机床当清洗设备；
 - 运行及清洗标识是我公司的创新产品。当油雾净化器运行时红色球向上浮动直至吸附到顶部，如设备关闭时红色球向下沉到底部。在运行一段时间后，过滤棉吸附到油雾杂质。油雾净化器吸力下降到70%时红色球就会下降到底部，提示需要清洗或更换过滤棉；
 - 捕集效率高达95%以上。
- Base on the theory of step-by-step filtering: the first step catches $\geq 20\mu\text{m}$; second step catches $\leq 2\mu\text{m}$; third one $\leq 1-0.1\mu\text{m}$. Selectable highly efficient filters are available to catch the mist produced in processing;
 - Easy to install All of the machines can be directly installed on the machine tool, bracket, easy tear open outfit;
 - Maintenance is simple, safe, and no spark risk and vulnerability of components. Strainers can be replaced with dust-cleaning-hose being connected;
 - Impellers are not exposed. So it's safe to be used;
 - Can catch sorts of water-soluble lampblack. mist and dust; Can capture the cutting surface grinder, centerless grinder and So on; Can capture the mist and waste gases produced in the processing of EDM machines, CNC machines, gear cutting machines and welding process and other kinds of machine tools or cleaning equipment;
 - Here is a signal to warn normal working or the filter cotton need to be changed. The red ball will float upward till the top When the machine is off the red ball will sink to the bottom. The filter cotton will catching oil mist after the machine works for a while when the catching ability is lower than 70%, the red ball will sink to the bottom. That means it's time to replace or clean the filter cotton.
 - The catching efficiency can reach 95% or more.

安装条件及要求

Installation condition and requirement:

可安装在设备侧面或设备上面，严禁安装在有可能发生火灾隐患的场所；工作场所的环境温度在 -50 摄氏度以下。

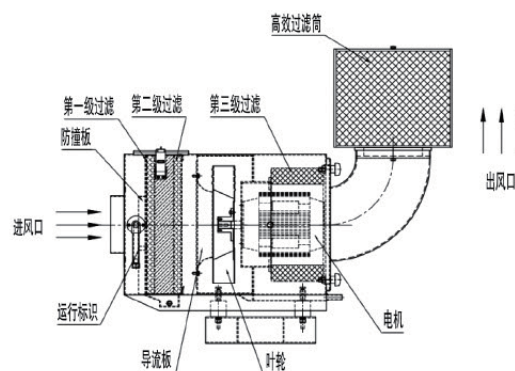
Can be installed in or on the side of the equipment device, it is forbidden to install in place of possible fire hazards: Workplace environment temperature under -50 degrees celsius.

应用领域

Application Fields

适用于通用车床、铣床、磨床、放电加工机、压铸机、CNC机床等，焊接加工产生的烟雾废气等各类机床或清洗设备油雾净化过滤。

Suitable to be installed on general lathe, milling machine, grinding machine, casting machine, CNC machine, welding and so on.



型号 Model	YW-500	YW-900	YW-1500	YW-1900
适用腔体体积Applicable cavity volume (m^3)	1.5	2.5	4	7
风量Air volume (m^3/h)	300-500	600-900	1100-1500	1500-1900
功率Power (Kw)	0.37	0.75	1.5	2.2
电源Power supply (V)	380/3相220	380/3相220	380/3相220	380/3相220
频率Frequency (Hz)	50/60	50/60	50/60	50/60
吸入口径Suction caliber (mm)	$\Phi 120$	$\Phi 150$	$\Phi 180$	$\Phi 210$
噪音Noise (dB)	60	62	65	65
外形尺寸Outline size (L x W x H) (mm)	700 x 340 x 460	800 x 380 x 520	1000 x 420 x 580	1200 x 480 x 620
重量Weight (Kg)	33	42	58	75



油雾净化器选配件 Oil mist collector accessories



高效过滤器
HEPA filter



电磁启动器
Electromagnetic starter



安装支架
Mounting bracket

高效过滤器 HEPA filter

型号Model	500型	900型	1500型	1900型
直径Diameter (mm)	Φ 300	Φ 300	Φ 400	Φ 400
高High (mm)	250	300	330	380
过滤精度Filtration accuracy (um)	0.5-1	0.5-1	0.5-1	0.5-1

尺寸规格若有变更，恕不另行通知 (Specifications are subject to change without notice)

电磁启动器 Electromagnetic starter

型号Model	500型	900型	1500型	1900型
额定电流范围 Setting current range (A)	3.2-5	4.5-7.2	6.8-11	6.8-11

尺寸规格若有变更，恕不另行通知 (Specifications are subject to change without notice)

安装支架 Mounting bracket

型号Model	500型	900型	1500型	1900型
规格Specifications (mm)	1800 × 310 × 280	1800 × 340 × 290	1800 × 385 × 370	1800 × 440 × 440

尺寸规格若有变更，恕不另行通知 (Specifications are subject to change without notice)



离心(立式)油雾净化器

Centrifugal (vertical) oil mist collector

工作原理 Working principle

- 1、机床内腔受到污染的空气将被吸入至回收器底部的预处理腔。
- 2、即由旋转涡轮产生的离心力，聚结原理加速作用使油雾轻易结合在一起，并转化为液化状态。
- 3、多层次高效的过滤棉，可拦截捕捉最小的微粒污染物，杜绝污染物重新在工厂车间中释放与扩散。
- 4、特殊排油管设计将油品送回机床重复使用。

1. The contaminated air in the machine cavity will be sucked into the pretreatment chamber at the bottom of the collector.
2. That is the centrifugal force generated by the rotating turbine, coalescence principle accelerates the oil mist easily combined, and transformed into a liquefied state.
3. Multi layer and high efficiency filter cotton can intercept and capture the smallest particle pollutants, and prevent the pollutants from releasing and diffusing in the workshop.
4. Special tubing design will return the oil to the machine tool for repeated use.

主要特点Main features

特殊涡轮

可以有效避免油污沉积在涡轮表面上，即使长期使用，涡轮动平衡也不会失衡，能成功避免振动加大的问题。透过离心式动力加速作用，使油雾分子轻易结合转化为液化状态。

后置过滤器

用于过滤雾、蒸汽和烟雾的后置筒式高效过滤器装置。可获得最高99.95%的过滤水平。

创新的设计

轻巧的机型设计以及过滤器的结构有利于更换过滤材料以及易于在任何机床上的安装，可直接加装机台顶部或是加置立架上。

Special turbine

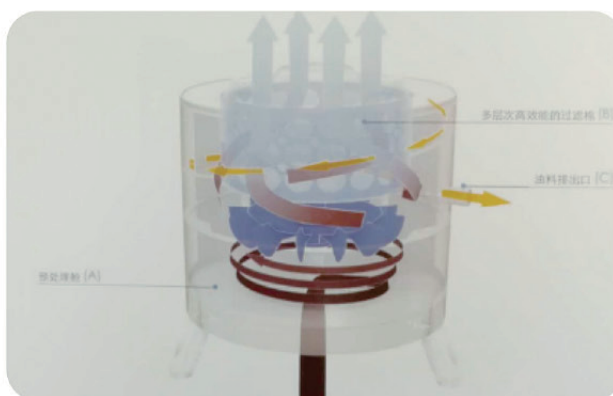
The utility model can effectively avoid the deposition of oil on the surface of the turbine, and even if used for a long time, the dynamic balance of the turbine can not be unbalanced, and the problem of vibration amplification can be avoided. Through the centrifugal dynamic acceleration, the oil mist molecules are easily combined and transformed into a liquefied state.

Back filter

Rear canister type efficient filter device for filtering fog, steam and smoke. The highest filtration level is up to 99.95%.

Innovative design

The lightweight design and the structure of the filter are good for replacing the filter material and are easy to mount on any machine, and can be added directly to the top of the machine or to the rack.



主要参数 Main parameter

型号 Model	风量 Air volume m³/min	功率 Power Kw	频率 Frequency Hz	风压 Wind pressure Pa	电压 Voltage V	吸风口径 Suction caliber mm	噪音 Noise db	重量 Weight kg
LX-700	650-800	0.25/0.29	50/60	700	380/三相220	Φ 120	64	14
LX-1000	950-1200	0.55/0.63	50/60	800	380/三相220	Φ 150	69	29



静电式油雾净化器

Intelligent electrostatic oil mist collector

应用场合：机加工、淬火、热处理等

过滤效率： $\geq 99\%$

过滤原理：静电

维护周期：2000-4000小时

维护方式：清洗电场和滤网

清洗方式：弱碱性水温浸泡清洗

安装形式：设备顶部或侧面安装

可选配件：无

最大风量： $1500\text{m}^3/\text{h}$

捕集对象：纯油冷却液烟雾

废气温度： $<80^\circ\text{C}$

仅供参考，具体视工况而定



油雾影响 Oil mist influence

- [对人体的影响] 0.3-0.5微米的颗粒吸入人体内会对健康构成危害，油雾沉积在工作区，易造成工伤等事故。
- [对生产力的影响] 油蒸汽得到及时收集；同时带走设备的热量，降低设备故障，减少设备停机次数。
- [影响环境、浪费资源] 如果油雾中含有粉尘和复杂的有害微粒自然排放，造成周边的环境污染。若有效回收，可节约资源。
- [火灾隐患] 油雾的混合物沉积在墙上、设备上有着潜在火灾隐患。
- [对机床的影响] 机床内的温度上升，造成电气系统提前绝缘老化增加系统故障率等原因。

工作原理 Working principle

本产品采用机械净化和静电净化双重作用。脏空气首先进入初级装置—净化整流室，采用重力惯性净化技术，室内的特殊结构逐步对大粒径污染物进行分级物理分离，并且均衡整流。剩余的小粒径污染物进入次级装置—高压静电场，静电场内部分两级，第一级为电离器，强电场使微粒荷电，成为带电微粒，这些带电微粒到达第二集尘器后立刻被收集电极吸附。最后通过滤网格栅，洁净的空气排出室外。

在静电式空气净化器的电晕电场异极间具有10—15千伏特的电位差，使不导电的气体分子经分解或电子附着成为自由离子。当气流通过收尘电场区域时，粒子经离子撞击带电而移向具相反电性的收集电极。换言之，收集机制的第一步使气体离子化，第二步使气流中的粒子带电，第三步使粒子撞击至收集电极板而被收集。理论上，分离带电粒子的电力与粒子带电量及收集电场强度之积成正比。此电力的大小，就比重为1的1微米粒子而言，为重力的3000倍；就比重为1的10微米粒子而言，为重力的300倍，此为静电式净化器高效能与高效率的原因。

- [Effects on the human body] Particles of 0.3-0.5 microns can cause harm to the health of the body, Oil mist deposits in the work area, Accidents such as work-related injuries are liable to occur.
- [Impact on productivity] The oil vapor is collected in time; Take away the heat of the equipment at the same time, Reduce equipment failure, Reduce the number of equipment downtime.
- [Environment, waste of resources] If the oil mist contains dust and complex harmful particles, it will naturally discharge, Cause environmental pollution around. If the effective recycling, can save resources.
- [Fire Hazard] A mixture of oil mist deposits on the wall, There are potential fire hazards on the equipment.
- [Effects on machine tools] Temperature rise in machine tools, causes the insulation premature aging of the electrical system and increases the system failure rate.

This product adopts mechanical purification and electrostatic purification dual role. The dirty air first enters the primary unit—purifying the rectifier chamber, Gravity inertial cleaning technique, The special structure of the room gradually divides large diameter pollutant into physical separation, And balanced rectifier. The remaining small diameter contaminants enter the secondary unit—the high-voltage electrostatic field, Electrostatic field, part two, The first stage is an ionizing device, A strong electric field causes particles to charge, Become charged particles, These charged particles arrive at the second dust collector and are immediately collected to adsorb the electrodes. Finally, through the screen grille, Clean air out of the room.

In the electrostatic air cleaner. the corona field has a potential difference of 10-15 kV between the poles, The molecules of an electrically charged gas are decomposed or electronically attached to free ions. When the airflow passes through the dust collector electric field region, The particles are charged by the ion and move to a collecting electrode with opposite electrical properties. In other words, The first step in the collection mechanism is to ionize the gas, The second step is to make particles in the air live, The third step is to cause particles to hit the collecting electrode plates and to be collected.

Theoretically, The power of a charged particle is proportional to the amount of charged particles and the strength of the collected electric field. The magnitude of this power, For a 1 micron particle with a specific mass of 1,3000 times as heavy as gravity; For a 10 micron particle with a specific mass of 1,300 times as heavy as gravity, To this end, electrostatic purifier efficient and efficient reasons.



静电式油雾净化器

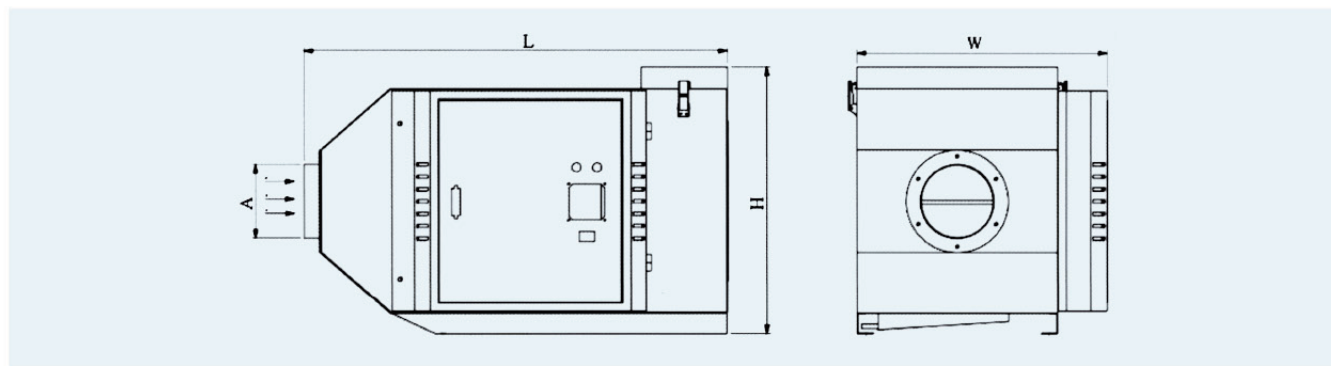
Intelligent electrostatic oil mist collector

产品特点 Product features

- 1、过滤效率高持久，特别适用于净化纯油切削产生的大量细小烟雾。
- 2、设备能耗远低于同类其它设备，只有其它同等效力设备用电量的1/5。
- 3、设备只需日常清洗维护，长期使用无耗材产生，无后续使用成本。
- 4、可以捕集高速数控机床，高效齿轮加工机床等各类机床等产生的 $<0.1\mu\text{m}$ 颗粒油烟、油雾。
- 5、捕集效率高达95%以上，净化效率99%以上。
- 6、易于安装，每台净化器均可直接安装在机床上，支架上，装拆方便。
- 7、维修简单，安全，即使连接着吸气软管，也可以更换滤网。风机叶轮不暴露在外，维修时十分安全。

1. Filtration efficiency, efficient and lasting, The utility model is especially suitable for purifying large amounts of small smoke produced by cutting pure oil.
2. Equipment energy Consumption is much lower than other similar equipment, Only 1/5. of the power consumption of other equivalent equipment.
3. Equipment only needs daily cleaning and maintenance, Long term use without supplies, No follow up cost.
4. High speed NC machine tools can be captured, High efficiency gear machining, machine tools and other machine tools, such as " $0.1\mu\text{m}$ ", "soot", "oil mist".
5. The trapping efficiency is over 95%, The purification efficiency is over 99%.
6. Easy to install, Each purifier can be directly mounted on the machine tool, On the scaffold, Convenient assembly and disassembly.
7. Easy maintenance, Security, Even with the suction hose, You can also change the filter screen. The fan impeller is not exposed. It's very safe to maintain.

设备外形 Device shape



主要参数 Main parameter

型号Model		JD-300	JD-500	JD-1000	JD-1500
电源Power		AC单相220V, 50Hz AC single phase 220V 50Hz			
设备功率Equipment power (kW)		0.13	0.35	0.35	0.55
使用风量The use of air m fand (m^3/h)		200-300	350-500	900-1000	1200-1500
风压Wind pressure (Pa)		600	600	700	700
电场 Electric field	电场数量Electric field quantity	1	2	2	3
	电场材质Electric field material	铝板Aluminium plate			
	清洗方式Cleaning method	超声波清洗、弱碱冲洗、晾干或烘干 Ultrasonic cleaning, weak alkali washing, drying or drying			
外形尺寸 Outline size	长L (mm)	620	850	1080	1310
	宽W (mm)	605	605	605	605
	高H (mm)	600	600	600	600
最大过滤流速Maximum filtration flow rate (m/s)		2	2	2	2
重量约Weight about (kg)		40	60	80	100
适用腔体体积Apply cavity volume fand (m^3)		1	2	4	6
吸风口直径Suction tuyere diameter (mm)		$\Phi 120$	$\Phi 180$	$\Phi 200$	$\Phi 200$
噪音Noise (dB)		65	65	68	68
吸入温度 Suction temperature		$<60^\circ\text{C}$			

尺寸规格若有变更，恕不另行通知 (Specifications are subject to change without notice)



电子脉冲粉尘回收净化系统

Electronic pulse dust recovery and purification system

FC系列粉尘净化系统是一款可靠、优质的沉流型滤筒除尘器，采用电子脉冲反冲喷吹清洁先进技术。产品具有更高的粉尘除量，且维护起来轻松、便捷，是一款能够满足各种加工设备需求的最理想的粉尘净化及贵重原料回收的产品。

FC series dust cleaning system is a reliable, high quality filter tube dust collector, which uses electronic pulse recoil injection to clean advanced technology. Products with higher air dust content, and maintenance easy and convenient, is a can meet all kinds of processing equipment demand of the most ideal dust purification and precious material recycling products.

主要特点 Main features

- 1、本净化系统集国内外先进技术于一体、全新理念设计、净化效率达99.5%。
 - 2、高性能离心风机，能耗小，风量大，效率高。
 - 3、滤芯自动清灰、应用反冲喷吹清洁先进技术。
 - 4、可配置多种多样滤筒、以满足不同性质的粉尘净化。
 - 5、可提供不同电压、频率的选择、以满足用户的不同要求。
- 1、the purification system integrates advanced technology at home and abroad, the design of a new concept, trapping efficiency of 99.5%.
- 2、high performance centrifugal fan, low energy consumption, large volume, high efficiency.
- 3、core automatic blowing clean ash, advanced technology application of recoil spray.
- 4、configurable variety of filter cartridges, to meet the different nature of the dust collection.
- 5、cad provide different voltage and frequency selection, to meet the different requirements of users.

应用范围 Application range

高性能FC系列电子脉冲粉尘回收净化系统可以很好满足您的粉尘及烟尘的过滤需求、可以对加工环境中各种常见的粉尘污染空气进行过滤净化。FC系列的工业应用范围可以覆盖冶金、化工、建材、医药、电力、电器、铸造、食品加工、机械制造焊接加工等领域。

High performance FC series electronic pulse dust recovery and purification system can well meet the needs of your dust and smoke filter. and can purify and filter all kinds of common dust pollution air in the processing environment. FC series of industrial application range can cover the metallurgical, chemical building materials, electric power, medical appliances, food processing, machinery manufacturing, casting, welding process and other fields.



主要参数 Main parameter

型号Model	FC10-10/EX	FC12-14/EX	FC18-30/EX	FC25-40/EX	FC30-47/EX	FC36-60/EX	FC42-70/EX
清灰方式Ash removal mode	自动喷吹	自动喷吹	自动喷吹	自动喷吹	自动喷吹	自动喷吹	自动喷吹
清灰喷吹力Soot blowing pressure (MPa)	0.4-0.6	0.4-0.6	0.4-0.6	0.4-0.6	0.4-0.6	0.4-0.6	0.4-0.6
处理风量Handling air volume (m³/h)	960-1380	1100-1620	1850-2350	2650-3150	3000-4160	3680-6380	4280-7820
过滤面积Filter area square meters (m²)	10	14	30	40	47	60	70
粉尘性质Dust properties	干性粉尘	干性粉尘	干性粉尘	干性粉尘	干性粉尘	干性粉尘	干性粉尘
除尘效率Dust filtration efficiency% (4-0.1um)	95-99.9	95-99.9	95-99.9	95-99.9	95-99.9	95-99.9	95-99.9
风机功率Fan power (kW)	1.1	1.5	2.2	3	4	5.5	7.5
风机数量及尺寸Number and size of tuyere (mm)	3-Φ120	3-Φ150	3-Φ150	3-Φ150	3-Φ180	1-Φ350	1-Φ450
外形尺寸L×W×H Outline size L×W×H (cm)	65×65×133	65×65×148	70×70×160	80×80×190	86×86×195	111×80×300	120×86×300

※抗静电防爆配置型号后加“EX”防爆标准，根据客户要求选型。

尺寸规格若有变更，恕不另行通知 (Specifications are subject to change without notice)