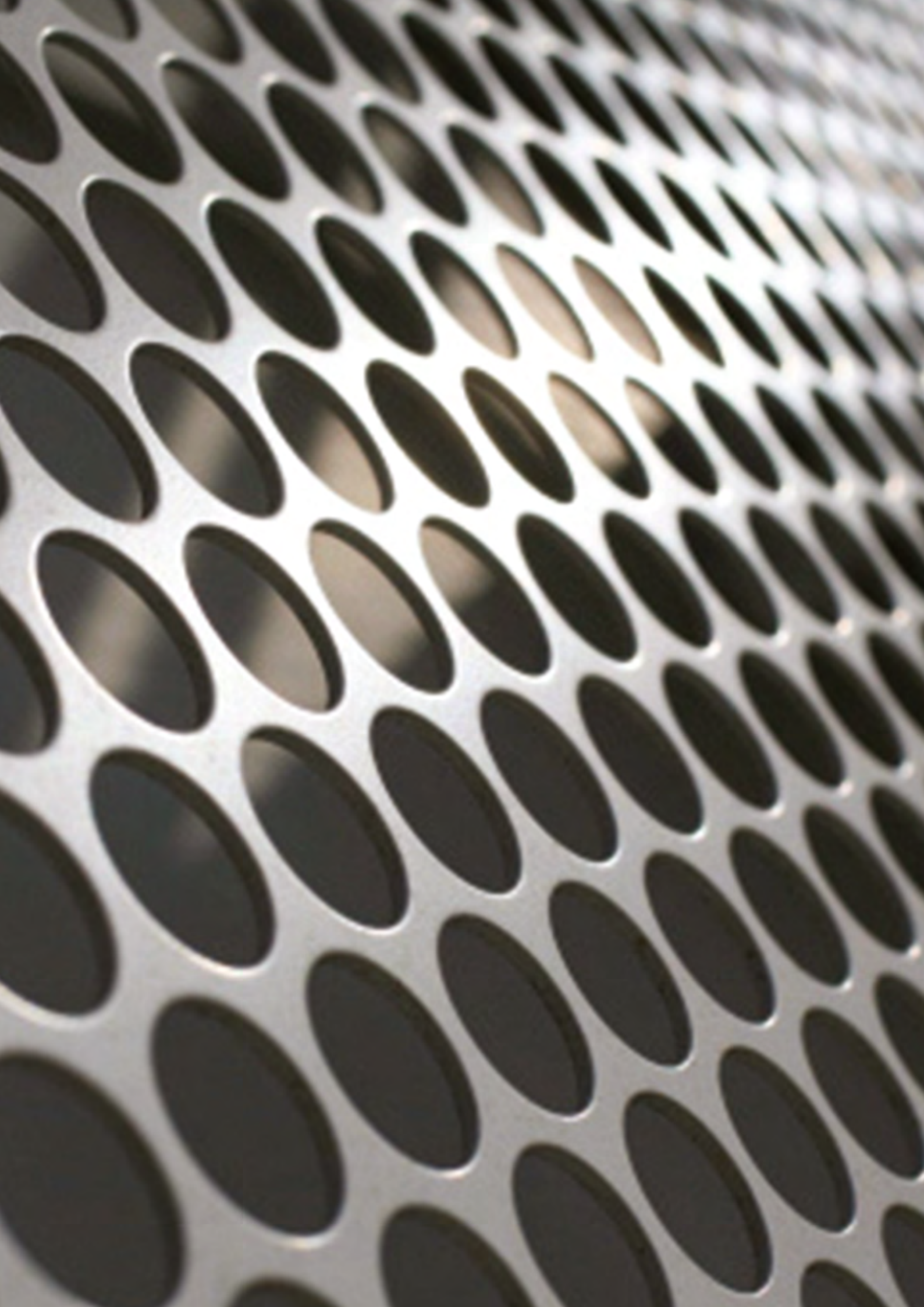


# Industrial Ventilation Systems





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# SovPlym

## SovPlym

SovPlym is a leading manufacturer and supplier of equipment for air filtration, industrial process ventilation and exhaust gas removal.

Based on best global technologies we have developed our own product lines of equipment.

We offer top quality solutions for air pollution control inside production facilities, bringing care of employees' health and improved work efficiency combined with environmental intelligence.

SovPlym is an international company with headquarters in Saint-Petersburg, Russia.

SovPlym was founded in 1989. International activities have started after successful sales in Russia where SovPlym has around 60% market share in its core segments. During these years, we have helped more than 30 000 customers to organize safe and clean working space.

*With more than 25 years  
in business, we understand  
our customer needs:  
reliable quality products,  
quick decisions, on time  
delivery and local support.  
And that's just what we offer.*

## The reasons to work with us:

- Increasing demands for lower energy costs
- Demand for increased productivity
- Demand for better safety
- Increasing demand for better health
- Environmentally Sustainable Development

## Services

We offer a full range of services for the design, construction, equipment supply, installation, engineering setup, warranty and after sale service. We also offer turnkey solutions.

## Our best argument

Happy Healthy Customers!



---

# For a safer, healthier, more profitable business

## **GOOD HEALTH IS GOOD BUSINESS**

Keeping a clean, dust-free working environment helps keep workers healthy and more engaged with their work and your company. The result is increased production and greater profitability. As health & safety laws around the hazards of fumes and gases become stricter to protect workers, helping your employees to keep a good health becomes an even better business investment.

SovPlym leads the way in the manufacturing and supplying of equipment for air filtration, industrial ventilation and exhaust gas removal. Our state-of-the-art systems for air pollution control inside production facilities improve work efficiency, health and safety, and conform to stringent environmental standards.

## **ELIMINATE EXPOSURE TO DAMAGING DUST, GASES AND POLLUTANTS**

SovPlym solutions are designed to protect workers and the surrounding environment by capturing and removing harmful pollutants as close to the source as possible. Our range includes everything you need to minimize hazardous side effects from welding, cutting and grinding; vehicle exhausts; and machining and metalworking.

## **PROTECT YOUR PEOPLE — AND YOUR MACHINES**

Pollutants like dust and fumes don't just affect humans, they can damage machines and tools too. SovPlym systems for automatic processes protect both operators and their machines.

## **ENERGY-SAVING, NOISE REDUCTION**

Our solutions are designed to work in specific climate conditions and working environments. SovPlym extraction systems are planned to optimize the required airflow, while reducing noise. The result is a cleaner, better, more cost-efficient workspace.

## **MORE THAN 25 YEARS OF EXPERIENCE AT YOUR SERVICE**

SovPlym's more than 300 skilled craftsmen have the backing of more than 25 years of supplying consistent, quality service to customers around the world. Our full range of services includes system design, construction, equipment, installation, engineering set up, start up support, warranty and after-sales service. We provide full technical support for projects and service organizations as well as spare parts and equipment, and turnkey solutions.

## **TOTAL QUALITY GUARANTEE**

We use the latest technology and equipment development techniques in our production cycles to guarantee optimum quality in everything you receive from us — from initial contact to final product assembly, and on-site testing.





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# Choose SovPlym solutions for:

- *Higher profitability*
- *A safer, healthier workplace — less cost for staff absences*
- *Ensure better quality of production — be more competitive*
- *Fulfilling demand for a low-energy, high output workplace*
- *Large savings on cleaning and maintenance*
- *Easier to keep and attract the right people*
- *Compliance with local environmental standards*

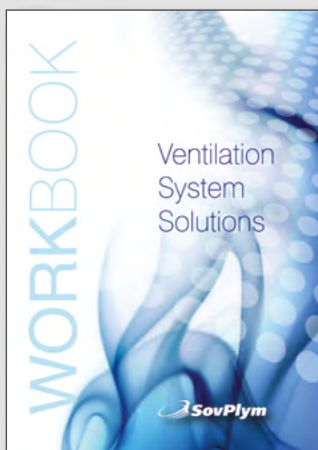


# SovPlym Printed



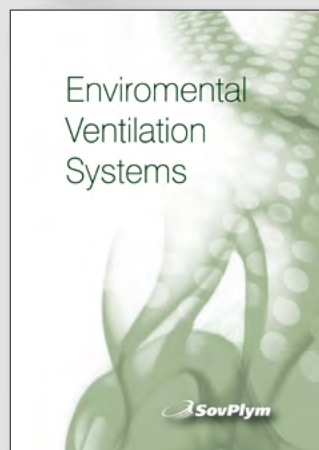
## IVS catalogue

Main product catalogue. Covers all range of SovPlym products and contains all essential information about different types of industrial ventilation solutions and filtration principles.



## Problems and solutions

This workbook intended for inspiration and better understanding of how to achieve the best operation and cost efficiency for various technical solutions and how to optimize the integration and functioning.



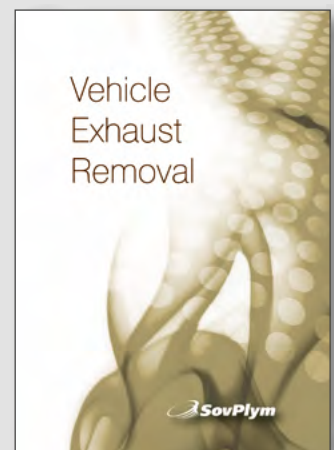
## EVS brochure

A 36 page product overview of our complete product range for, extraction and filtration, resource management, production quality, energy saving and workplace efficiency.



## Oil mist & Oil smoke

Showing our product range for handling oil mist and oil smoke. Our products bring top performance, low operating cost and a quick return of your investment.



## Vehicle Exhaust Removal

Products and systems for vehicle exhaust removal for automotive workshops, car service facilities, truck repairs, construction machinery, vehicle inspection stations, emergency service stations, military installations, etc.



## Leaflets, handouts

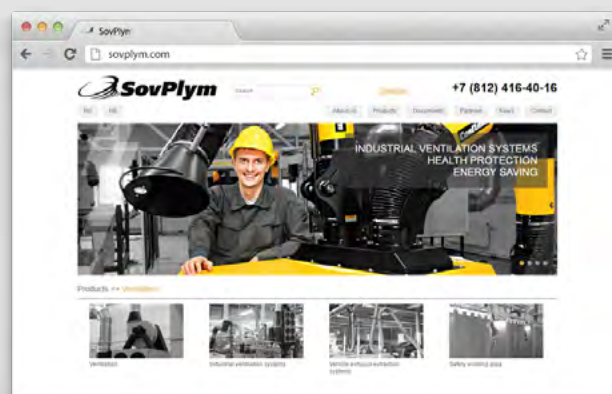
All kind of printed materials about new applications, specialized solutions and customized products.



# SovPlym Digital

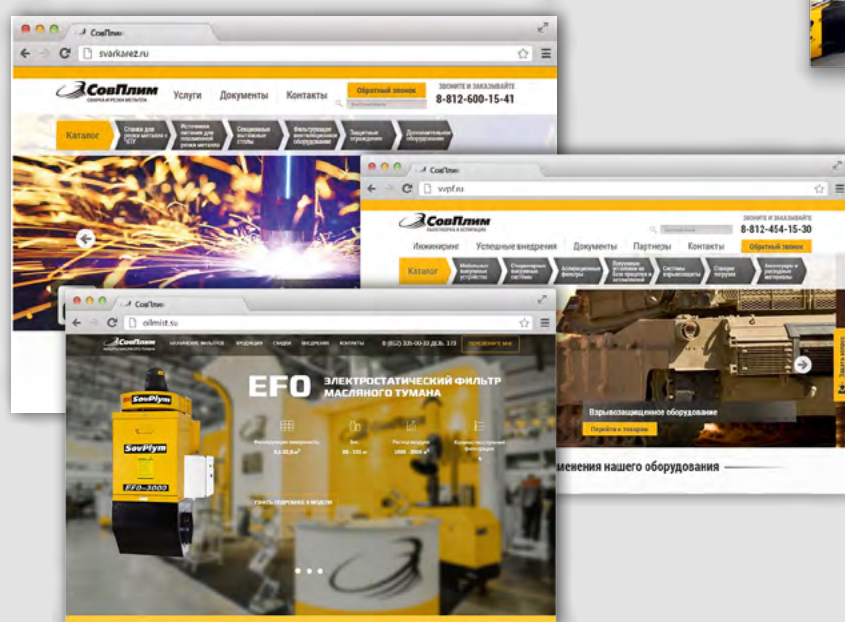
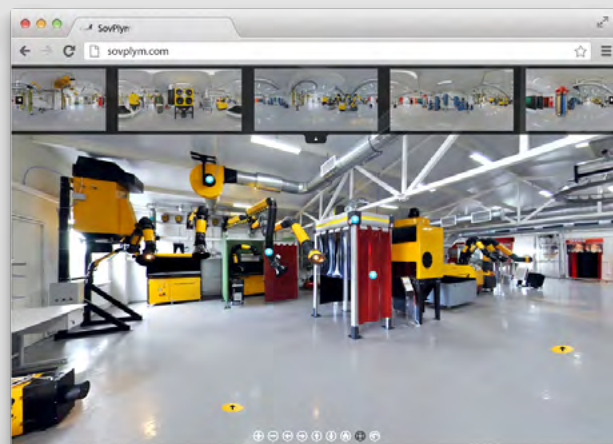
## Website [www.sovplym.com](http://www.sovplym.com)

Contains all information about company, product, solutions and services. Visit our website to get latest information about upcoming events and campaigns, as well as for technical support, users' guides and other materials.



## Virtual showroom

Visit our showroom with just one click to see all the latest products and technical solutions.



## Landing pages

Dedicated resources for the most advanced and effective SovPlym solutions for different industries and applications.

## Social media

Stay with us. Let us know your opinion about SovPlym products, services and support.

## Newsletters

Stay updated with our latest news, success stories, newest products and events information. Subscribe today to get special bonuses and preferences.









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# Dust and fumes processes

## PROTECTING YOUR PEOPLE WHEN WELDING, CUTTING AND GRINDING

Exposure to dust and fumes from welding, thermal cutting, grinding, blasting and other metalwork processes can be extremely dangerous for employees. Most dangerous are toxic dust and fumes, and particles that cannot be seen with naked eye. Such contaminants end up deep inside the lungs and cause serious harm to the health of the workers.

*Staff stay healthy, production is raised, costs lowered and your workplace becomes more attractive. SovPlym's range of dust and fumes extraction solutions keep the air in industrial environments clean and safe to breathe.*

### CAPTURE OF TOXIC FUMES AT SOURCE

SovPlym offers a range of extraction arms, wall panels, downdraft welding tables and special modular types of downdraft tables for thermal cutting machines. We also provide push-pull ventilation solutions that capture welding fumes emitted by multiple sources in a wide production area.

SovPlym filter units include mechanical and electrostatic units with a wide range of filter media and cartridges suitable for all common industrial applications.

### OPTIMAL ENERGY EFFICIENCY

All SovPlym systems come with smart controls and sensors to ensure optimal energy efficiency by adjusting the speed of the central fan according to the number of workers using the system. These sensors and controls reduce the risk of malfunctions and provide all essential information about system condition for easier, more cost-efficient maintenance.



# Systems for welding, cutting and grinding

**SOVPLYMS RANGE OF DUST AND FUME EXTRACTION SOLUTIONS  
BRINGS A HEALTHY AND EFFICIENT WORKING ENVIRONMENT.**

## FAST TRACK

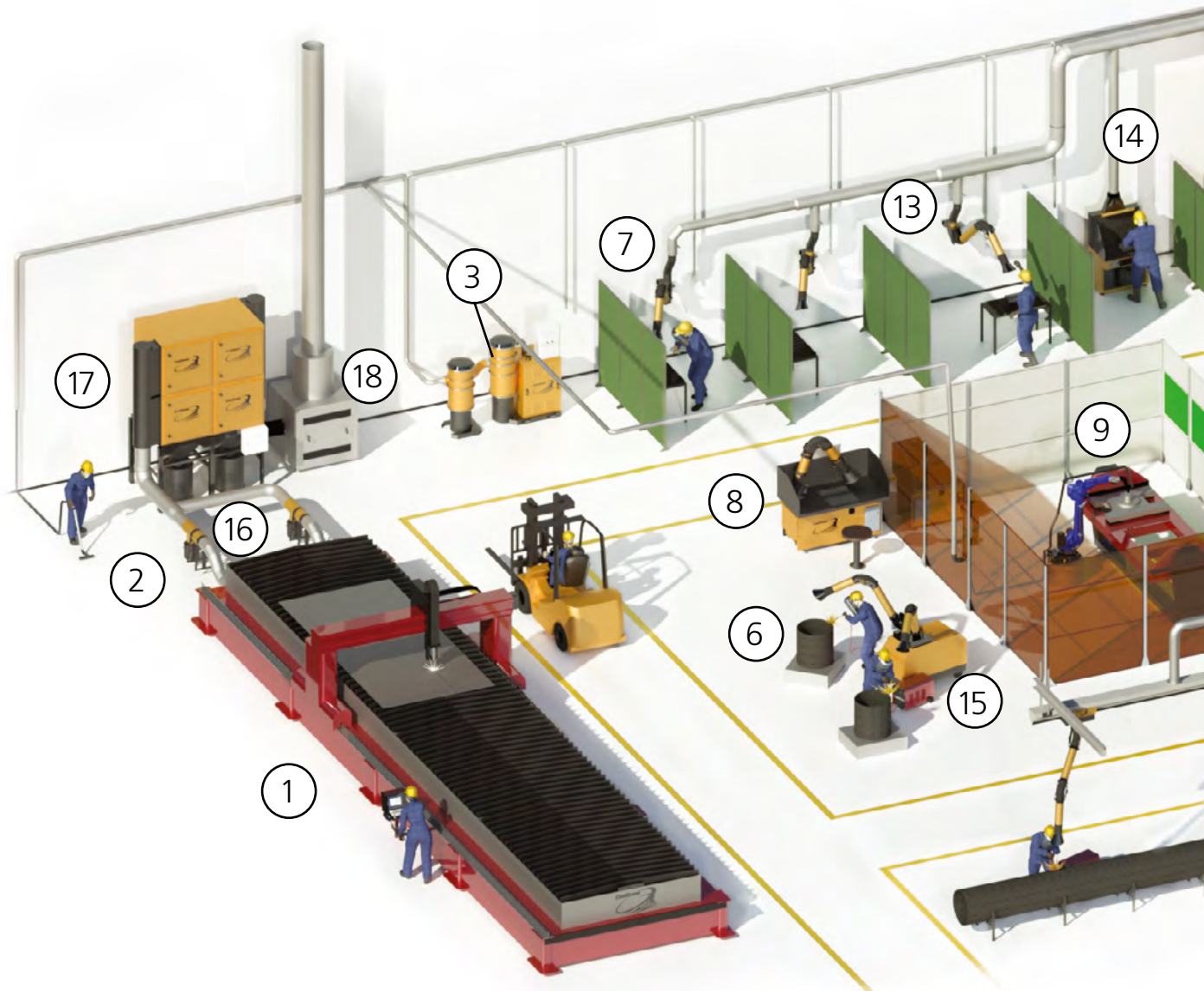
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## THERMAL CUTTING (GAS, PLASMA, LASER)

1. CCT metal thermal cutting table 3x10 m (2 rows x 5 base modules). Fumes are removed directly through the table.

## HIGH VACUUM

2. General cleaning. Hoses are connected to outlets in different areas of workshop.
3. Central vacuum unit SPV with pre separator.





## WELDING

4. Flexible welding area for overlong parts. A rail system with several sliding extraction arms is mounted above the area. (Extraction arm BEA-M-3H mounted on sliding carriage).
5. Large parts welding area. Extraction of fumes by console mounted extraction arms EF-3530.
6. Temporary welding area for large parts. Fumes are extracted by DCSC-M mobile unit.
7. Small parts welding. BEA-M-3H flexible extraction arms connected to central system.
8. Welding post for small parts with CCM-1200 downdraft table.

## ROBOTIC WELDING

9. On-torch fumes extraction, robotic welding application.
3. Central vacuum unit SPV with pre separator.

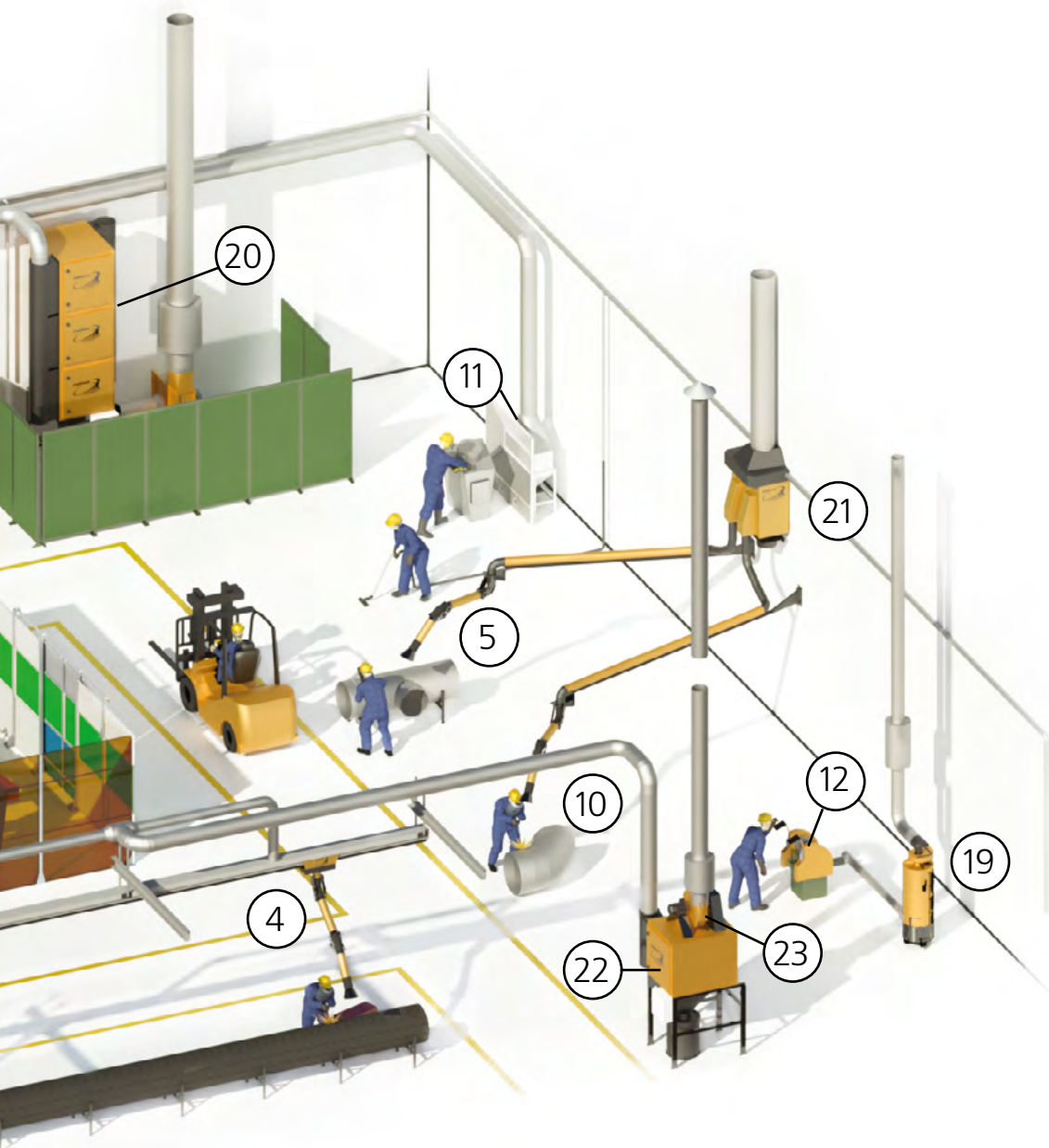
## GRINDING/CUTTING

10. Large parts grinding area. Extraction by console mounted extraction arms EF-3530.
11. Large parts grinding with extraction wall panel SVP-5000.

12. Grinding machine connected to PU dust collector unit with manual filter cleaning.
13. Small parts grinding. BEA-M-3H flexible extraction arms connected to central system.
14. Small parts grinding working post with CCZ downdraft table.
15. Mobile self-cleaning filter unit DCSC-M-2.

## FILTERS/FANS

16. Reinforced direct-flow cyclones CPO-4000.
17. Modular self-cleaning filter unit DCSC-16.
18. High-pressure fan HPF-1500 with silencer and silencing enclosure.
19. PU dust collector unit with manual filter cleaning. Industrial fan VMA-3000 directly mounted.
20. Modular self-cleaning filter unit DCSC-12-V.
21. DCSC-W wall hanging self-cleaning filter.
22. Modular self-cleaning filter unit DCSC-4.
23. Industrial fan VMD-6000 directly mounted on DCSC-4.









# Vehicle exhaust

## ELIMINATE EXHAUST FUMES TO PREVENT STAFF ILLNESS AND INCREASE PRODUCTIVITY

The safe and efficient removal of exhaust fumes is paramount for the health, safety and efficiency of your staff — especially when working inside large transport depots, service stations or automotive factories. Even short exposure to vehicle exhaust fumes can be harmful.

*SovPlym solutions are designed to capture 100% of toxic gases and particles at source and remove it from your premises. Reducing health risks, ensure you comply with regulations, and increase efficiency through smooth, clean operation.*

### CUSTOMIZED FOR ANY USE

Our systems are widely used in transport depots, service stations, automotive plants and military facilities. We also offer a range of customized products specially developed for Fast Response units such as fire brigades, rescue services and other emergency units.

### DESIGNED FOR GREATER SAFETY AND FLEXIBILITY

Our self-detachable pipe nozzle detaches automatically when a vehicle leaves the garage in case of an emergency call. Specialized retractable hose reel and rail systems with carriages follow the vehicle inside the depot where necessary and keep emergency pathways clear at all times.



# Systems for vehicle and truck service/repair workshops

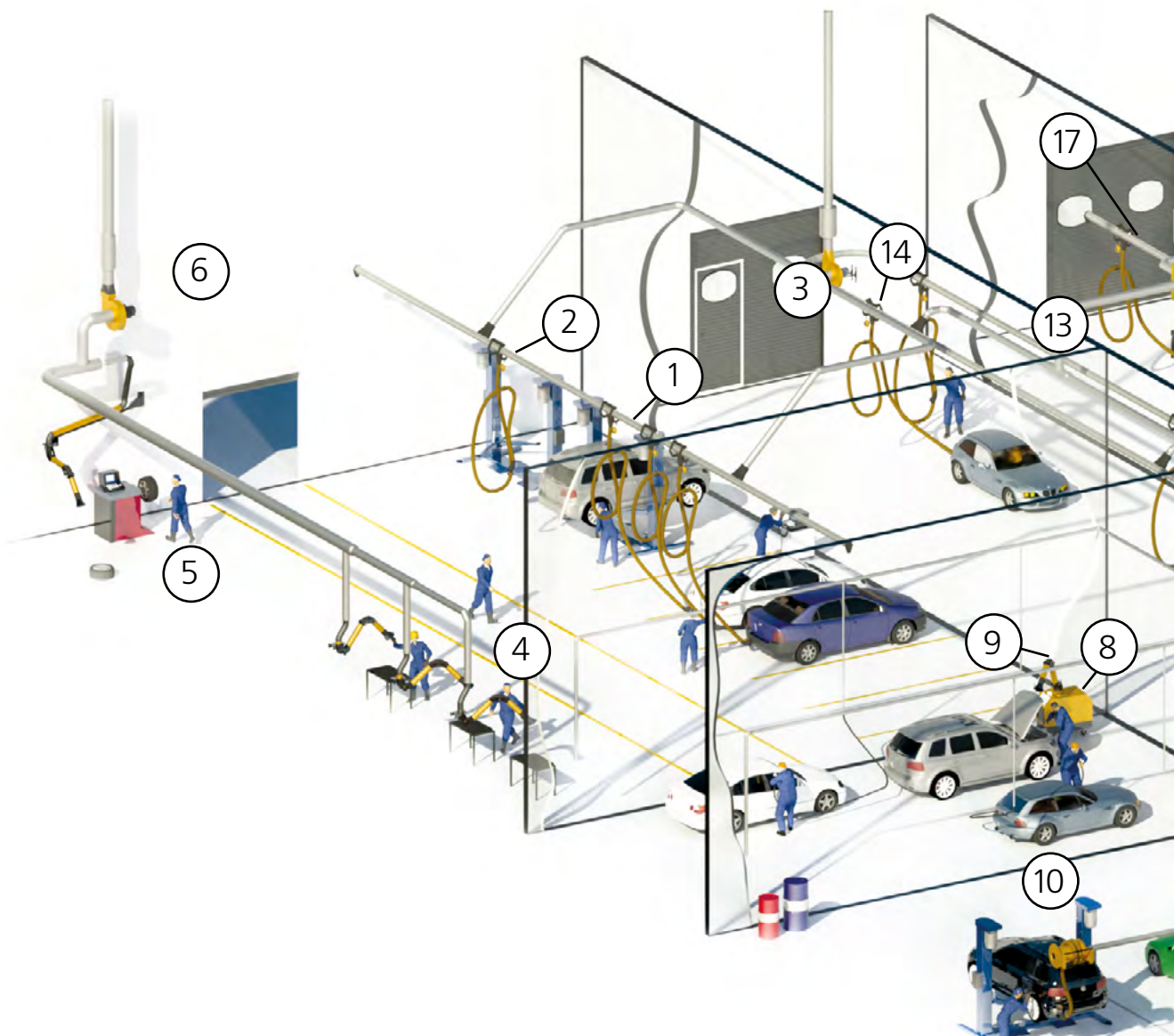
**SOVPLYM OFFERS A WIDE RANGE OF SOLUTIONS TO CAPTURE EXHAUSTS, DUST AND FUMES AND TO REMOVE IT!  
WE PROVIDE A TIDY AND SAFE WORKSHOP**

## FAST TRACK

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## GARAGES AND CAR REPAIR

1. Straight rail exhaust system ARST.
2. Sliding carriage EC-100, with hose and IGripR rubber nozzle.
3. Industrial fan VMK-4700.
4. Workbench. Flexible extraction arm, BEA-M-2H.
5. Tire area. Flexible extraction arm with extension crane, EF-M-2530.
6. Central extraction system, with Industrial fan VMK-6000.





**CAR BODY REPAIR**

7. High vacuum unit, SPV-400.
8. Mobile self-cleaning filter unit, DCSC-M-1.
9. Flexible extraction arm with light, BEA-M-3SL.

**CAR SERVICE**

10. Spring exhaust reel, ARS-100, with hose and IGripR rubber nozzle.
11. High temperature hose EF-100.
12. Central extraction system, with industrial VMK-4700 fan.

**CAR TECHNICAL INSPECTION/AUTO MOTIVE INDUSTRY**

13. Loop rail exhaust extraction system, ARL Loop.
14. Sliding carriage, EC-100, with hose and IGripR rubber nozzle.
15. Industrial energy fan, TEF-600.

**TRUCKS TECHNICAL INSPECTION**

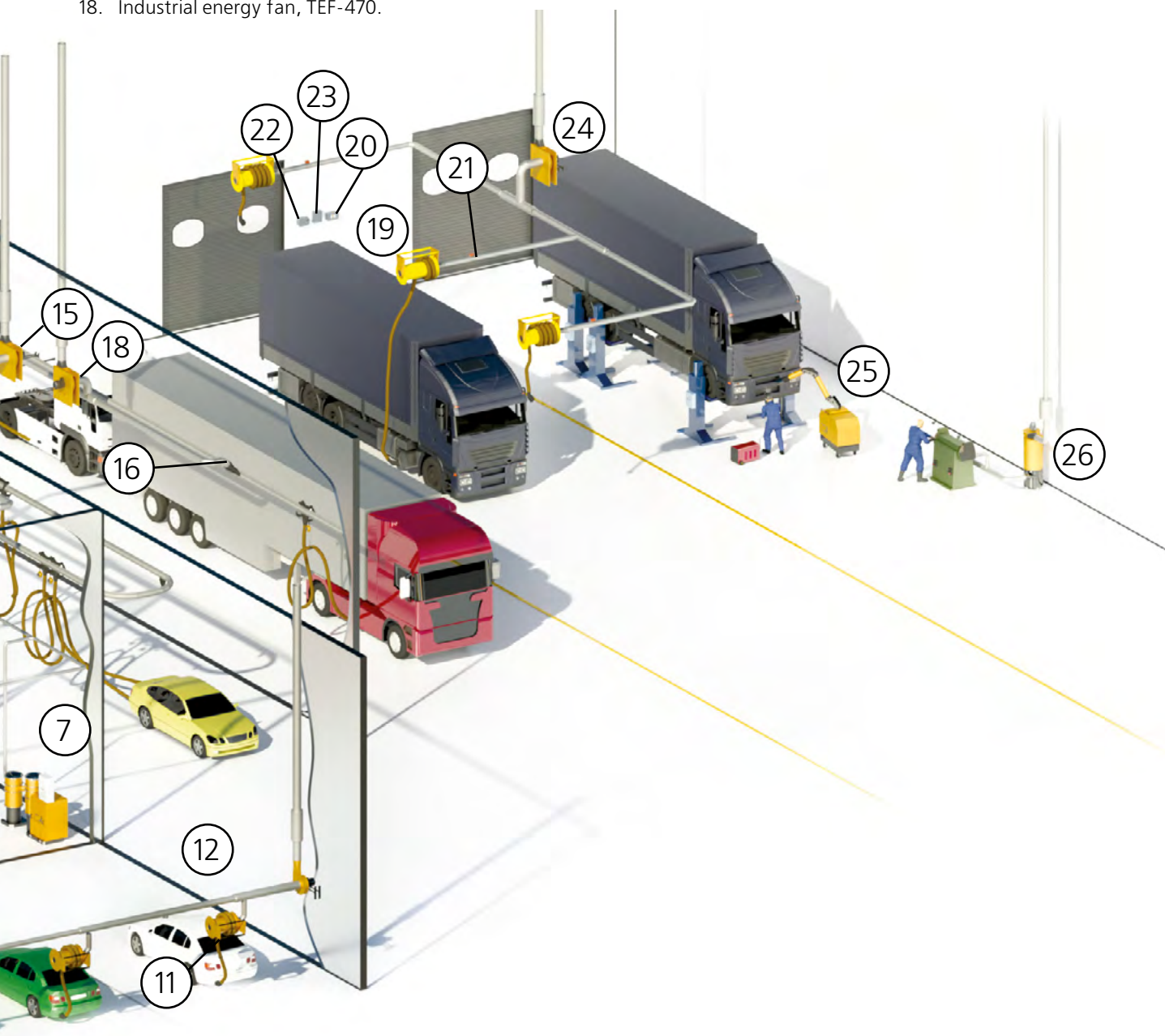
16. Straight rail exhaust system STP.
17. Sliding carriage EC-150, with hose and IGripST nozzle.
18. Industrial energy fan, TEF-470.

**TRUCK SERVICE**

19. Motorized exhaust reel ARM-150 with hose and IGripST nozzle and autom. start/stop micro switch SMSR.
20. Remote control SRD.
21. Automatic damper AD-160 with control box ICE-LC.
22. Frequency converter.
23. Signal coordinator, USS.
24. Industrial energy fan, TEF-600.

**TRUCK REPAIRS**

25. Mobile self-cleaning filter, DCSC-M-2, with BEA-M-3SL extraction arm.
26. Dust collector PU-1500 with VMA-3000 fan.







**SovPlym**



# Machining and metal fabrication

## OIL MIST SOLUTIONS THAT PROTECT YOUR ENVIRONMENT — AND YOUR BUDGET

Oils and coolant liquids are widely used for various types of metal working applications. While these substances are harmless in liquid form, they can be toxic and hazardous when turned into smoke and mists. Long exposure to these contaminants could result in serious health problems for employees.

The risk of fire makes oil mist capturing essential for industrial safety. Oil fumes condense on the surfaces of the equipment and significantly increase the risk of smoldering or ignition.

Extraction and filtration of oil mists is one of the most difficult types of pollution control due to their stickiness and chemical properties.

*SovPlym self-cleaning filter elements offer a long lifetime, increasing productivity and reducing maintenance costs. Bringing significant cost savings and reducing your environmental footprint.*

### SOLUTIONS TO SUIT YOUR NEEDS

SovPlym oil mist solutions facilitate the collection of condensed oil and coolants for re-use. Our product range consists of small, compact filters for single CNC machines to large modular machines for oil mist extraction from multiple sources.

### ALL APPLICATIONS AND TEMPERATURE RANGES

SovPlym filtration solutions are suitable for a wide range of applications, temperature ranges and working conditions. SovPlym oil mist filters are effective and reliable units suitable for virtually all kinds of coolants and oil mists. Our filter units include both mechanical and electrostatic types.





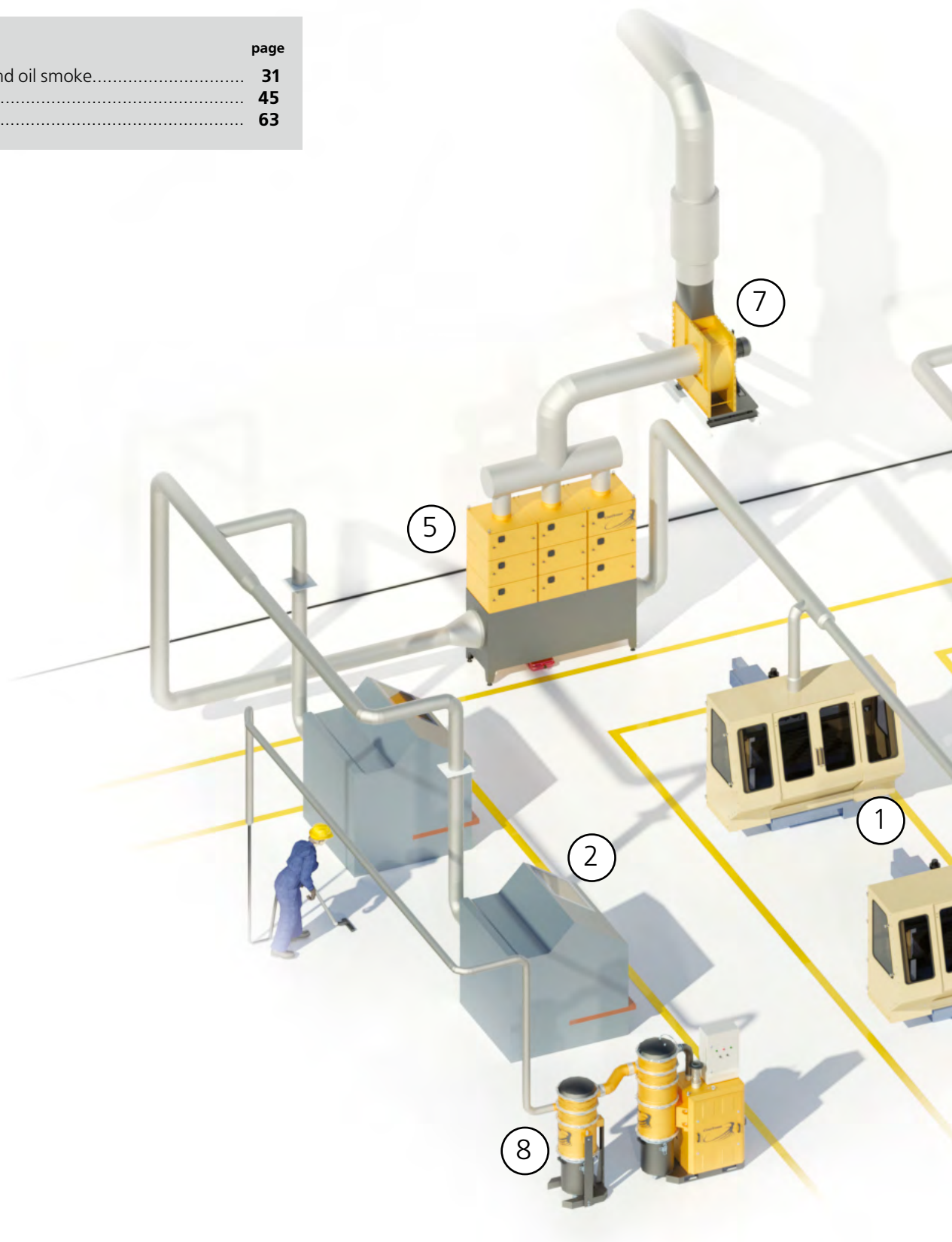
# Systems for machining and metal fabrication

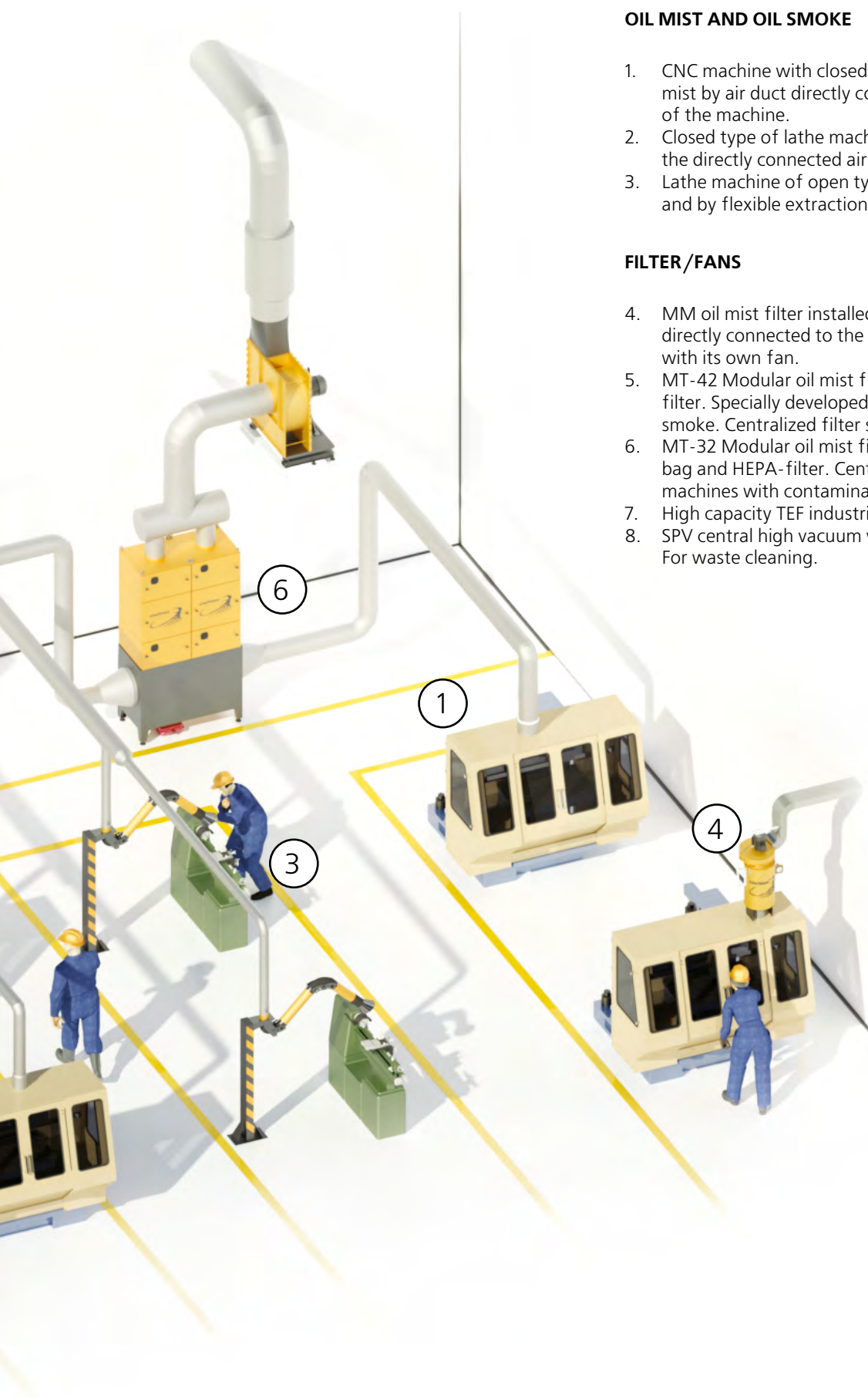
SOVPLYM SOLUTIONS FOR HANDLING OIL MIST AND OIL SMOKE PROTECTS YOUR WORKING ENVIRONMENT,  
INCREASES YOUR PRODUCTIVITY AND REDUCES YOUR MAINTENANCE COSTS

**FAST TRACK**

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## OIL MIST AND OIL SMOKE

1. CNC machine with closed inner chamber. Extraction of oil mist by air duct directly connected to the inner chamber of the machine.
2. Closed type of lathe machine. Oil mist is extracted through the directly connected air duct.
3. Lathe machine of open type. Oil mist is captured at source and by flexible extraction arm (column mounted BEA-M)

## FILTER/FANS

4. MM oil mist filter installed on top of CNC machine and directly connected to the inner chamber. Filter is equipped with its own fan.
5. MT-42 Modular oil mist filter. 6-stage filtration with HEPA-filter. Specially developed for filtration of oil mist and oil smoke. Centralized filter serving several machines.
6. MT-32 Modular oil mist filter unit. 5-stage filtration with bag and HEPA-filter. Centralized filter serving several machines with contaminated coolant.
7. High capacity TEF industrial fan with silencer.
8. SPV central high vacuum with pre-separator. For waste cleaning.







# Plastic and composite

## ENSURE A DUST-FREE, SAFE AND HEALTHY WORK ENVIRONMENT

Composite and plastic materials are widely used in many applications in the Aeronautics, Automotive, Construction and many other industries. As the use of plastic, fiberglass and other composite materials increases, so does the number of composite handling processes that generate significant amounts of dust.

Without a proper extraction solution this composite dust, consisting of microscopic material fibers, becomes a serious health risk for personnel. It is also a risk for production efficiency and safety, as dust can affect handling precision, causing equipment malfunctions or even possible fire and explosion.

*All SovPlym components are rigorously tested and certified according to health and safety standards as necessary, ensuring you are offered the best work conditions to safeguard production and improve uptime.*

### EXTRACTION SOLUTIONS FOR ALL APPLICATIONS

We provide a wide range of extraction solutions for virtually all types of handling applications.

SovPlym centralized extraction systems with custom-made suction casings for various hand tools are among the most reliable and effective solutions for plastic and composite dust.

SovPlym extraction panels and downdraft tables are specially designed for smaller composite parts handling, ensuring a safe and healthy working environment.

### ATEX

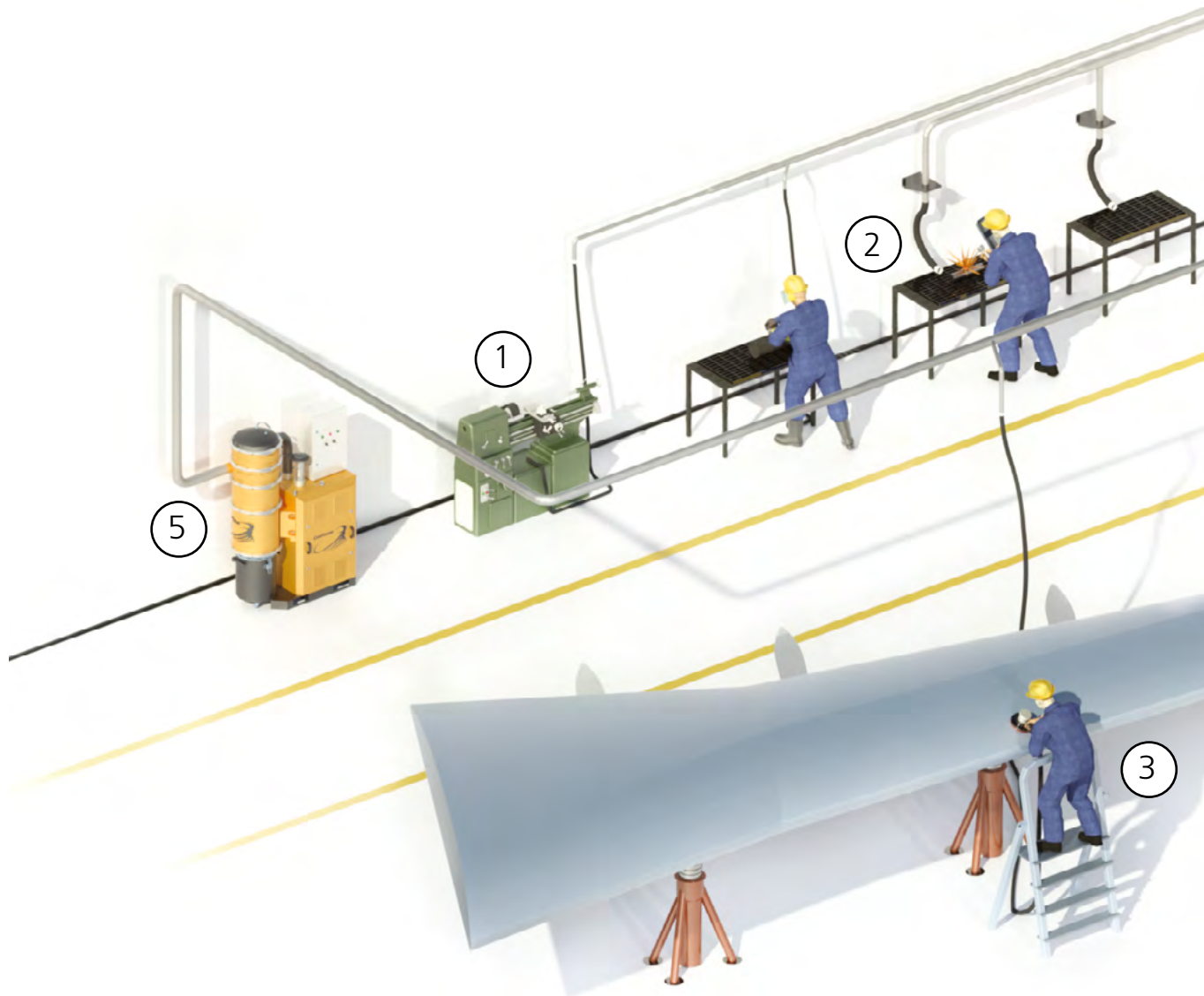
On special order these products will fulfill ATEX conditions: Dust side 21, Clean side 22, Outside unit 22.



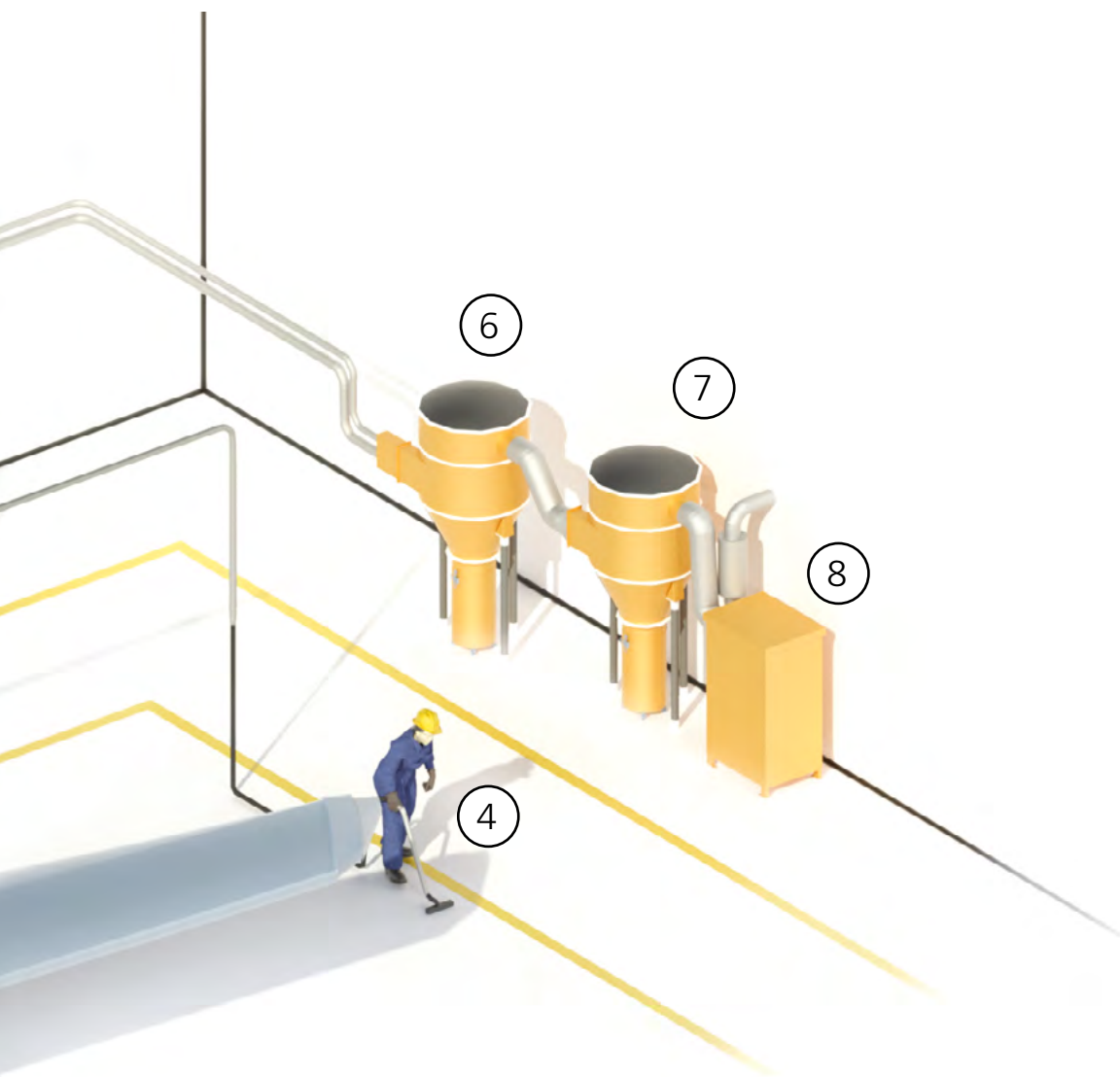


# Systems for plastic and composite

SOVPLYM IS OFFERING A WIDE RANGE OF HIGH VACUUM DUST EXTRACTION SOLUTIONS.  
PLEASE CONSULT YOUR LOCAL SALESPERSON FOR FURTHER INFORMATION



1. Lathe machine of open type. Extraction of chips and dust is made by hand-held vacuum nozzle.
2. Welding post for small parts. Extraction of welding fumes is done by flexible vacuum pipe nozzle with a funnel.
3. Grinding of big parts made of composite materials (aircraft parts, ships, vehicles). Dust extraction through suction casings on the hand held tools.
4. General cleaning with vacuum hose and floor extraction nozzle.
5. SVU central vacuum unit.
6. Pre-separator for central vacuum system.
7. Filter unit for central vacuum system.
8. Vacuum producer (high-pressure fan) for central vacuum system.







# Food and pharma

## EXTRACTION SOLUTIONS THAT CONFORM TO THE MOST STRINGENT HYGIENE STANDARDS

Pharmaceutical industries and food processing plants have strict requirements for clean and hygienic production premises and inside air as an essential part of the multi-stage quality control of end products.

Besides product quality issues, dust in Food and Pharma industries could be dangerous for employee health.

*SovPlym solutions ensure you keep a clean, hygienic production site, healthy working environment and exceptional end-product quality.*

## EVERYTHING YOU NEED FOR EFFICIENT EXTRACTION

SovPlym stainless steel extraction and ventilation solutions for food processing plants include a range of accessories and hoses approved for food production. The SovPlym range of solutions includes bulk products, additives and many others.

## SOLUTIONS FOR AGGRESSIVE ENVIRONMENTS AND CLEAN ROOMS

We offers specially designed filters and extraction arms made of chemical and corrosive resistant stainless steel or zinc coated steel painted white for the pharmaceutical industry. SovPlym products and solutions can be used for extracting fine dust and fumes typical for tablet presses, coating machines and packaging lines.









# SovPlym quality service and original parts

**OUR COMMITMENT IS TO PROVIDE YOU WITH THE HIGHEST LEVELS OF SERVICE AND SUPPORT TO ENSURE OUR PRODUCTS AND SOLUTIONS GIVE YOU OPTIMAL PERFORMANCE THROUGHOUT THEIR LIFESPAN.**

Together with our original spare parts you can choose the option of preferential service contracts to safeguard your equipment operation. Tapping into our extensive knowledge and long experience lets you predict which components and parts need to be exchanged and which consumables and spare parts you should keep in stock. All our accessories, consumable and spare parts are normally kept in stock ready for immediate delivery whenever you need them.

*When you sign a service and maintenance contract, you can stop worrying about costly downtime or production stoppages.*

## **SOVPLYM PROACTIVE SERVICE AND MAINTENANCE**

We ensure that your equipment performs at all times, preserving safety and the environment.

SovPlym service and maintenance contracts are customised to your exact needs, covering everything from regular scheduled checks to major service overhauls.

You choose the service level and equipment you want to cover. We perform inspections, maintenance and service calls at agreed intervals and at times that suit you.

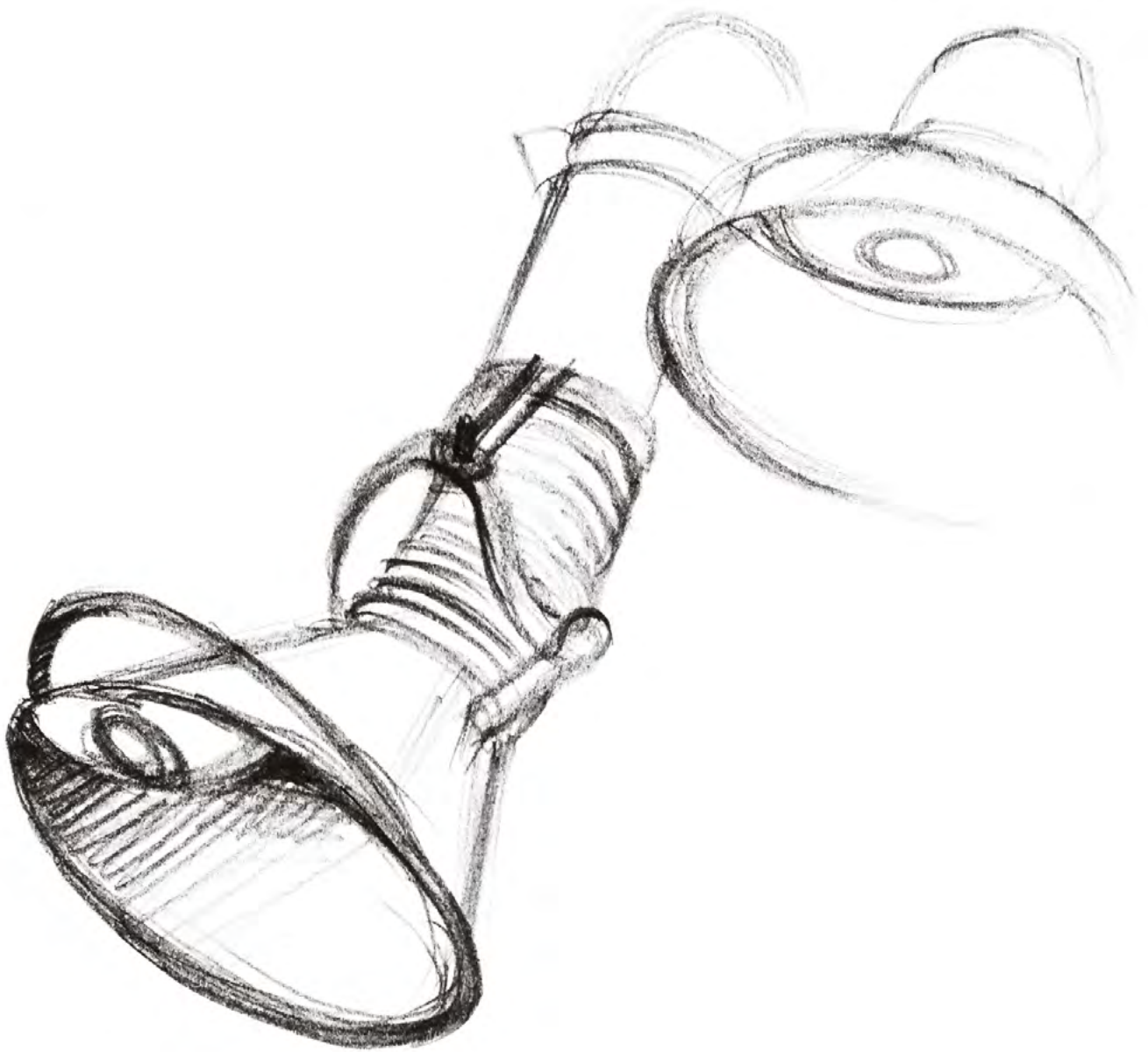
Learn more at our website.





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# Extraction Arms





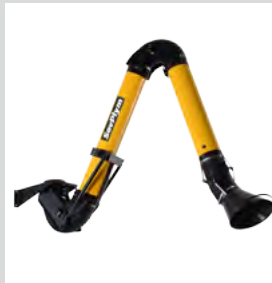


# PRODUCT GUIDE



## LabArm

Steel extraction arm. Compact table-top installation. For soldering fumes, dusts and chemical vapors.



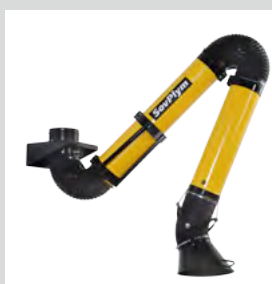
## BEA

Our top selling extraction arm for welding fumes, oil mists, dusts and similar pollutants. Available in different lengths.



## WBE

For small premises or limited workplaces. Compact telescopic extraction arm for fumes.



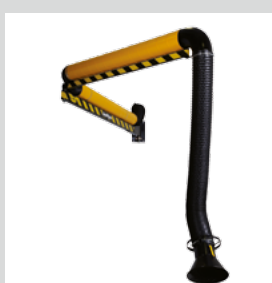
## BEA-200

High capacity extraction arm for welding fumes, oil mists, dust and similar pollutants. Available in different lengths.



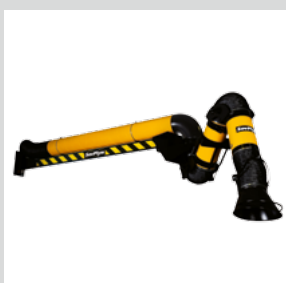
## EF

Outstanding reach and flexibility. Console mounted extraction arm for welding fumes, oil mists, dust and similar pollutants.



## EC

For limited space workshops and production areas. Console mounted telescopic extraction arm. High capacity for welding fumes.



## EF-200

High capacity console mounted extraction arm. For welding fumes, oil mists, dust and similar. Outstanding flexibility and reach.



# LabArm Table-top extraction arm



## Description

Table-top extraction arm of compact size designed for at source extraction and removal of fumes, vapors of chemical substances and fine dusts.

## Industries and applications

- Electronics
- Pharmaceuticals
- Food industry
- Chemical industry
- Precision engineering
- Art and Jewelry

## Features

- Free flow ducts
- Various mountings
- Wide selection of different types
- Built-in damper
- Two types of suction nozzles
- Robust design

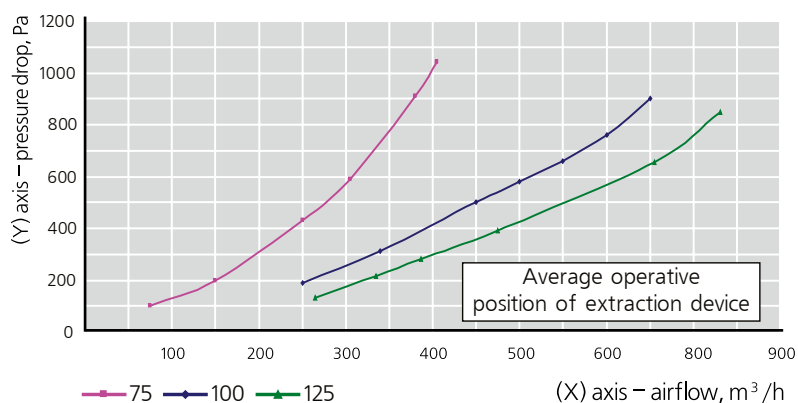
## Article numbers / Technical characteristics

Article №	Model	Reach area, m	Ø Diameter, mm	Recommended airflow, m³/h	Installation height, m
5383	LabArm -75-07S	0,7	75	125 - 250	0,7 – 1,0
5347	LabArm -75-10S	1,0	75		
5349	LabArm -75-15S	1,5	75		
5348	LabArm -75-10H	1,0	75		
5350	LabArm -75-15H	1,5	75		
5381	LabArm -100-15S	1,5	100	250 - 500	0,7 – 1,0
5382	LabArm -100-15H	1,5	100		
5384	LabArm -125-2S	2,0	125	500 - 700	0,7 – 1,5
5385	LabArm -125-2H	2,0	125		
5386	LabArm -125-3S	3,0	125		
5387	LabArm -125-3H	3,0	125		

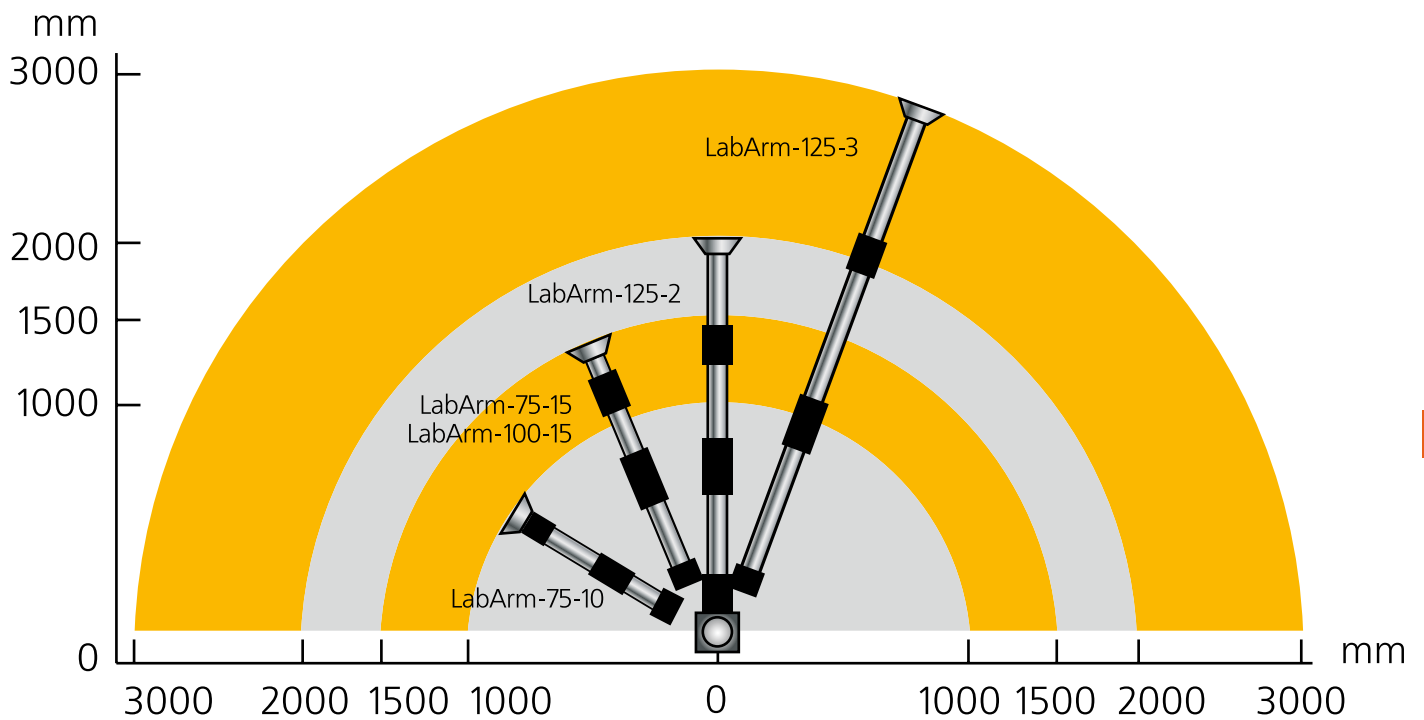
## Delivery set / Mountings

Model	Type of mounting	Delivered with
LabArm -75-07S	Table + wall	-round nozzle -tubular nozzle -holder for table mounting
LabArm -75-10S	Table-top	
LabArm -75-15S		
LabArm -75-10H	Wall	-round nozzle -tubular nozzle
LabArm -75-15H		
LabArm -100-15S	Table-top	-round nozzle
LabArm -100-15H	Wall	
LabArm -125-2S	Table-top	-round nozzle
LabArm -125-2H	Wall	
LabArm -125-3S	Table-top	
LabArm -125-3H	Wall	

## Pressure drop diagramm



## Reach area



## Applications / Installations







# BEA Extraction arm



## Description

Extraction arm that is suitable for the wide range of applications where the extraction and removal of welding fumes and fine dust at source is required.

## Industries and applications

- Metalwork
- Automotive
- Food industry
- Precision engineering
- Shipbuilding

## Features

- Free flow ducts
- Pneumatic cylinder support
- Wide selection of different types
- Built-in damper
- Robust design
- Built in light and fan start/stop options

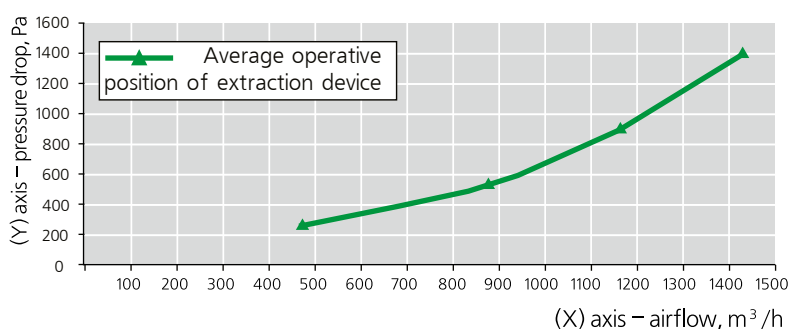
## Article numbers / Technical characteristics

Article №	Model	Reach area, m	Ø Diameter, mm	Recommended airflow, m³/h	Installation height, m
5359	BEA-M-2S	2	160	1000-1200	1-2
6130	BEA-M-2SL	2			
5351	BEA-M-2H	2			2
6124	BEA-M-2HL	2			
5361	BEA-M-3S	3			1-3
6131	BEA-M-3SL	3			
5355	BEA-M-3H	3			2-3
6125	BEA-M-3HL	3			
5363	BEA-M-4S	4			1-3,5
6132	BEA-M-4SL	4			
5356	BEA-M-4H	4			
5364	BEA-M-4HL	4			

## Delivery set / Mountings

Model	Type of mounting	Delivered with
BEA-M-2S	<b>Without bracket (as standard):</b> - mobile filters only	
BEA-M-2SL	<b>With bracket (as option):</b> - wall - column (sPA)	Light Buttons light/fan
BEA-M-2H	<b>With bracket (as standard):</b> - wall - column (sPA)	Bracket; Connection hose (160); 2 x Hose clamp (160);
BEA-M-2HL	<b>Without bracket:</b> - inlets (ESP, DCSC-W)	
BEA-M-3S	<b>Without bracket (as standard):</b> - mobile filters only	
BEA-M-3SL	<b>With bracket (as option):</b> - wall - column (sPA)	Light Buttons light/fan
BEA-M-3H	<b>With bracket (as standard):</b> - wall - column (sPA)	Bracket; Connection hose (160); 2 x Hose clamp (160);
BEA-M-3HL	<b>Without bracket:</b> - inlets (ESP, DCSC-W)	
BEA-M-4S	<b>Without bracket (as standard):</b> - mobile filters only	
BEA-M-4SL	<b>With bracket:</b> - wall - column (sPA)	Light Buttons light/fan
BEA-M-4H	<b>With bracket (as standard):</b> - wall - column (sPA)	Bracket; Connection hose (160); 2 x Hose clamp (160);
BEA-M-4HL		

## Pressure drop diagramm





# BEA-200 Extraction arm



## Description

Extraction arm that is suitable for the wide range of applications where the extraction and removal of large amounts of welding fumes and fine dust at source is required.

## Industries and applications

- Metalwork
- Automotive
- Food industry
- Precision engineering
- Shipbuilding

## Features

- Free flow ducts
- Pneumatic cylinder support
- Increased airflow capacity
- Built-in damper
- Robust design
- Wide selection of different types

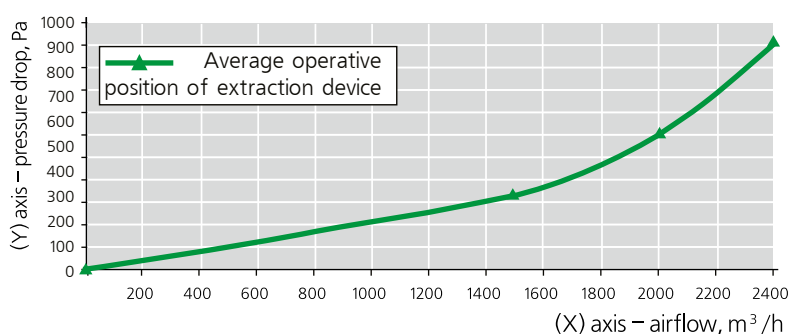
## Article numbers / Technical characteristics

Article №	Model	Reach area, m	Ø Diameter, mm	Recommended airflow, m³/h	Installation height, m
5311	<b>BEA-200-2S</b>	2	200	1000-2000	1-2
5312	<b>BEA-200-3S</b>	3			1-3
5313	<b>BEA-200-4S</b>	4			2
5314	<b>BEA-200-2H</b>	2			2-3
5315	<b>BEA-200-3H</b>	3			2
5316	<b>BEA-200-4H</b>	4			2-3
5317	<b>BEA-200-2HF</b>	2			2-3
5318	<b>BEA-200-3HF</b>	3			
5319	<b>BEA-200-4HF</b>	4			

## Delivery set / Mountings

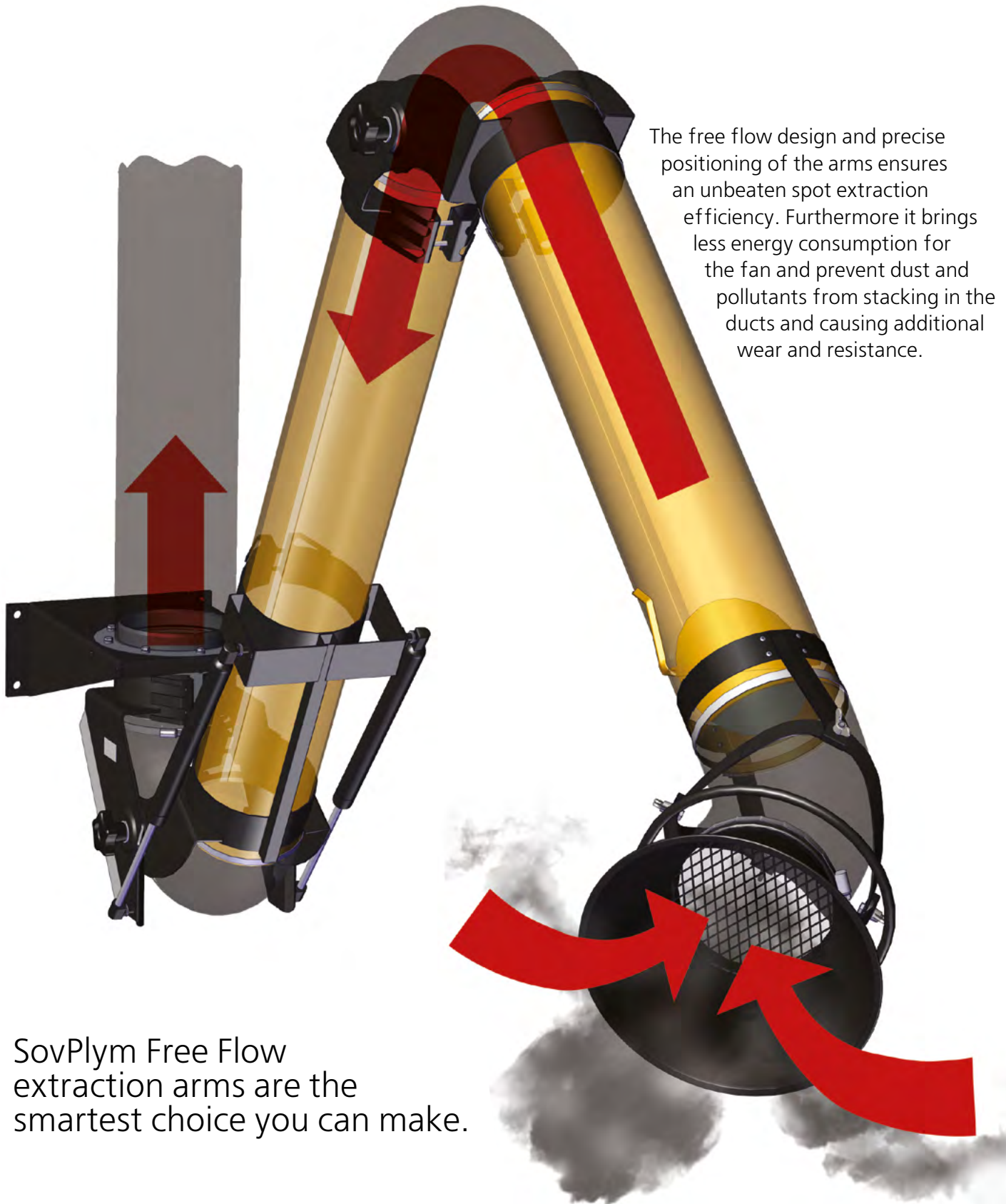
Model	Type of mounting	Delivered with
<b>BEA-200-2S</b>	<b>Without bracket (as standard):</b> - DCSC-M-2 filters only	
<b>BEA-200-3S</b>		
<b>BEA-200-4S</b>		
<b>BEA-200-2H</b>	<b>With bracket (standard):</b> - wall	Bracket; Connection hose (Ø 200); 2 x Hose clamp (Ø 200);
<b>BEA-200-3H</b>		
<b>BEA-200-4H</b>		
<b>BEA-200-2HF</b>	<b>Without bracket (as standard):</b> - DCSC-W-200 filters only	
<b>BEA-200-3HF</b>		
<b>BEA-200-4HF</b>		

## Pressure drop diagramm



# Let the airflow free

SovPlym has developed a best-in-class extraction arm design. All support mechanisms are external, allowing a totally free airflow inside the arm.



SovPlym Free Flow extraction arms are the smartest choice you can make.



# EC Extraction arm with extension crane



## Description

Extraction unit with telescopic arm that is suitable for the wide range of applications where the extraction and removal of welding fumes and fine dust at source is required. Extension crane greatly increases reach area of the unit and provides additional mounting options for larger working areas.

## Industries and applications

- Metalwork
- Automotive
- Precision engineering
- Shipbuilding

## Features

- free flow ducts
- reliable extension crane support
- telescopic extraction arm
- built-in damper
- robust design
- reach area up to 8 m

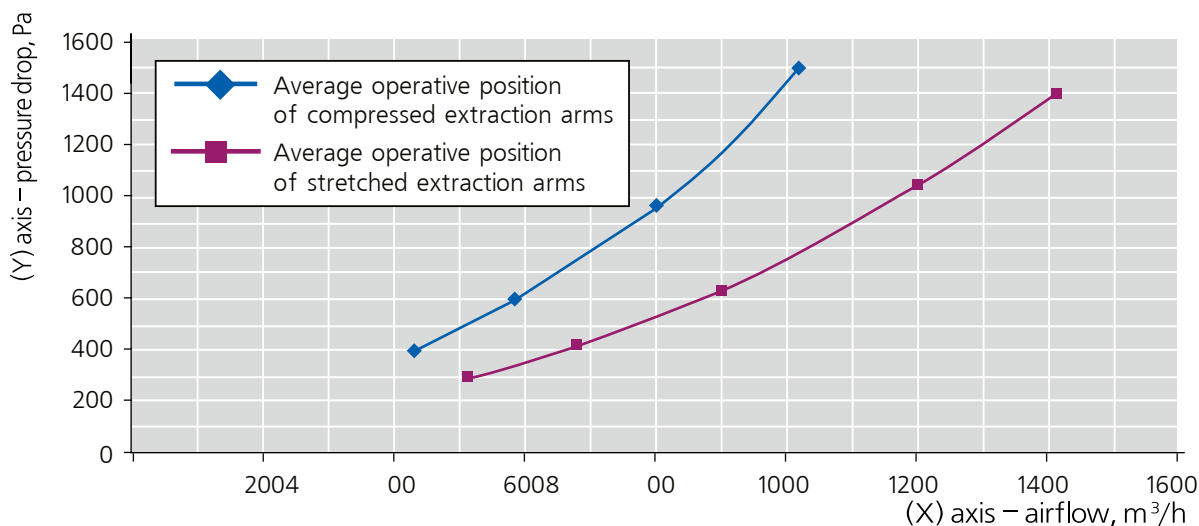
## Article numbers / Technical characteristics

Article №	Model	Reach area, m	Ø Diameter, mm	Recommended airflow, m <sup>3</sup> /h	Installation height, m
5137	EC-3016	3	160	800-1200	2-3
5138	EC-4516	4,5			
5139	EC-6016	6			
5140	EC-8016	8			

## Delivery set / Mountings

Model	Beam length, m	Delivered with
EC-3016	1,5 + 1,2	2 x support beam; telescopic arm with round funnel; connection hose (Ø 160); 2 x hose clamp (Ø 160);
EC-4516	2,5 + 1,7	
EC-6016	3,5 + 2,4	
EC-8016	4,5 + 3,4	

## Pressure drop diagramm



# WBE Telescopic extraction arm



## Description

Compact and easy to handle telescopic extraction arm. Specially designed for small workplaces and premises with low ceilings. Suitable for extraction of light dust and fumes. Reliable maintenance-free telescopic mechanism also ensures appropriate self-support and positioning of the unit.

## Industries and applications

- Electronics
- Welding
- Chemical industry
- Precision engineering

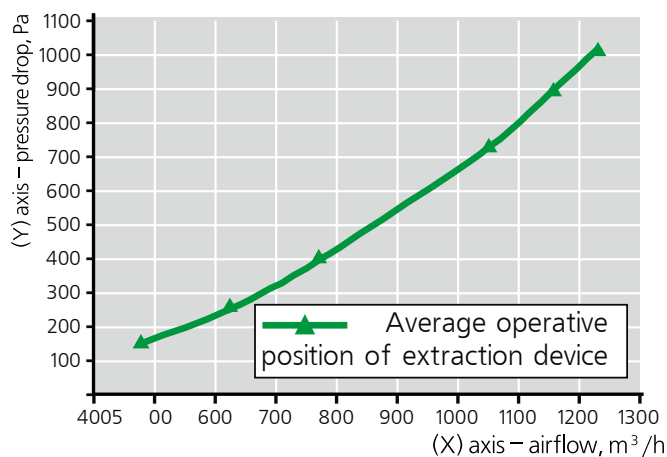
## Features

- Telescopic design
- Various mountings
- Ready for direct fan connection
- Built-in damper
- Easy positioning
- Maintenance-free internal mechanisms

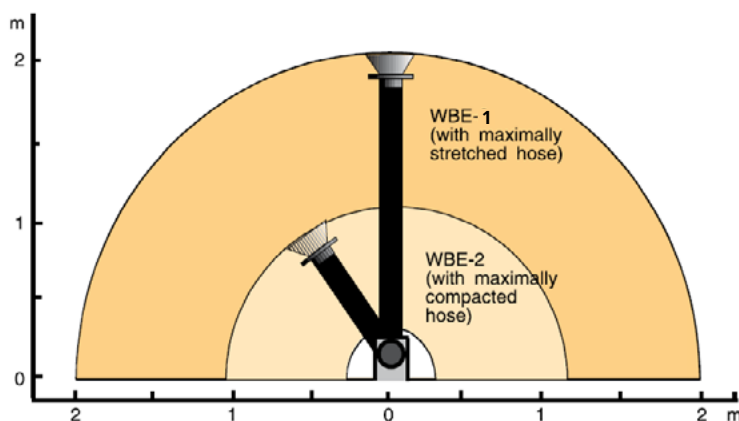
## Article numbers / Technical characteristics

Article №	Model	Reach area, m	Ø Diameter, mm	Recommended airflow, m <sup>3</sup> /h	Installation height, m
5388	WBE	2	160	800 - 1200	2,2 – 3

## Pressure drop diagramm



## Operating range





# EF Extraction arm with extension crane



## Description

Extraction unit that is suitable for the wide range of applications where the extraction and removal of welding fumes and fine dust at source is required. Extension crane increases reach area of the unit and provides additional mounting options for larger working areas.

## Industries and applications

- Metalwork
- Automotive
- Precision engineering
- Shipbuilding

## Features

- free flow ducts
- reliable extension crane support
- wide selection of different types
- built-in damper
- robust design
- built in light and fan start/stop options

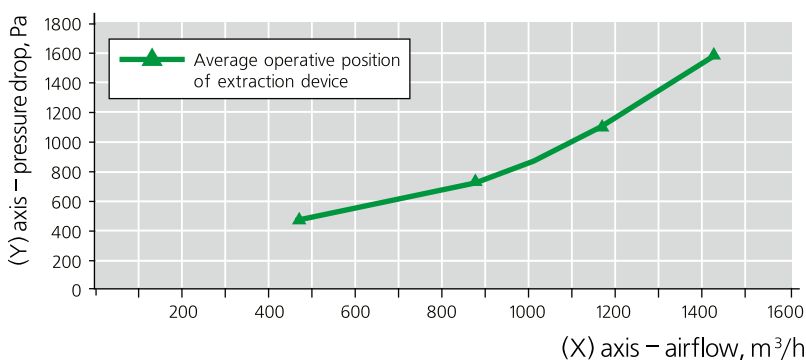
## Article numbers / Technical characteristics

Article №	Model	Reach area, m	Ø Diameter, mm	Recommended airflow, m³/h	Installation height, m
5365	EF-M-1520	3	160	1000-1200	2
5366	EF-M-1520-L	3			2
5367	EF-M-1530	4			2-3
5368	EF-M-1530-L	4			2-3
5369	EF-M-2520	4			2
5370	EF-M-2520-L	4			2
5371	EF-M-2530	5			2-3
5372	EF-M-2530-L	5			2-3
5373	EF-M-3520	5			2
5374	EF-M-3520-L	5			2
5375	EF-M-3530	6			2-3
5376	EF-M-3530-L	6			2-3
5377	EF-M-4520	6			2
5378	EF-M-4520-L	6			2
5379	EF-M-4530	7			2-3
5380	EF-M-4530-L	7			2-3
5080	EF-M-4540	8			2-3

## Delivery set / Mountings

Model	Beam length, m	Delivered with
EF-M-1520	1,5	support beam; extraction arm with round funnel; connection hose (Ø160); 2 x hose clamp (Ø160);
EF-M-1530	1,5	
EF-M-2520	2,5	
EF-M-2530	2,5	
EF-M-3520	3,5	
EF-M-3530	3,5	
EF-M-4520	4,5	
EF-M-4530	4,5	
EF-M-4540	4,5	
EF-M-1520-L	1,5	support beam; extraction arm with round funnel; connection hose (Ø160); 2 x hose clamp (Ø160); built-in light on the funnel; fan start/stop button (on the funnel);
EF-M-1530-L	1,5	
EF-M-2520-L	2,5	
EF-M-2530-L	2,5	
EF-M-3520-L	3,5	
EF-M-3530-L	3,5	
EF-M-4520-L	4,5	
EF-M-4530-L	4,5	
EF-M-4540-L	4,5	
EF-M-4540	4,5	

## Pressure drop diagramm



# EF-200 Extraction arm with extension crane



## Description

Extraction unit that is suitable for the wide range of applications where the extraction and removal of large amounts of welding fumes and fine dust at source is required. Extension crane increases reach area of the unit and provides additional mounting options for larger working areas.

## Industries and applications

- Metalwork
- Automotive
- Precision engineering
- Shipbuilding

## Features

- free flow ducts
- reliable extension crane support
- wide selection of different types
- built-in damper
- robust design
- increased airflow capacity

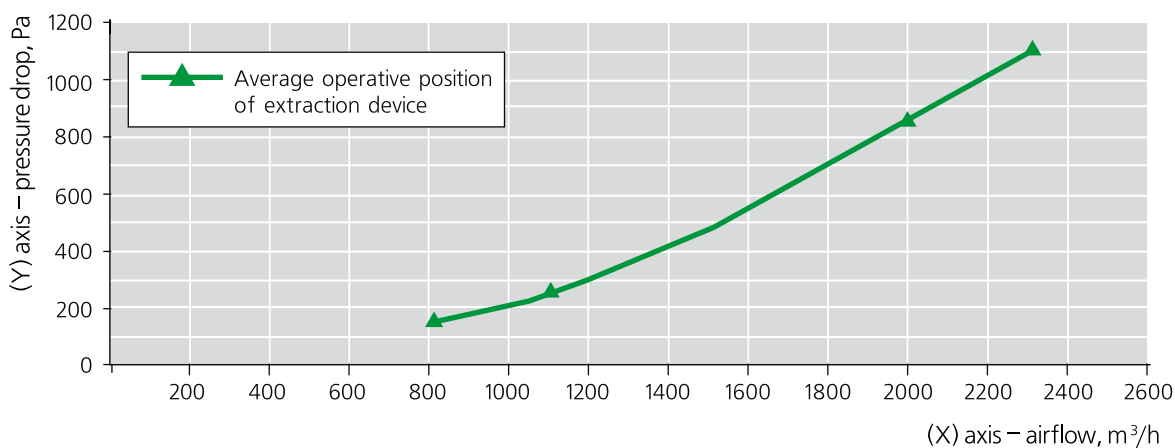
## Article numbers / Technical characteristics

Article №	Model	Reach area, m	Ø Diameter, mm	Recommended airflow, m³/h	Installation height, m
5627	EF-200-1520	3	200	1000-2000	2
5628	EF-200-1530	4			2-3
5629	EF-200-2520	4			2
5630	EF-200-2530	5			2-3
5631	EF-200-3520	5			2
5632	EF-200-3530	6			2-3
5633	EF-200-4520	6			2
5634	EF-200-4530	7			2-3

## Delivery set / Mountings

Model	Beam length, m	Delivered with
EF-200-1520	1,5	support beam; extraction arm with round funnel; connection hose (Ø200); hose clamp (Ø200);
EF-200-1530	1,5	
EF-200-2520	2,5	
EF-200-2530	2,5	
EF-200-3520	3,5	
EF-200-3530	3,5	
EF-200-4520	4,5	
EF-200-4530	4,5	

## Pressure drop diagramm

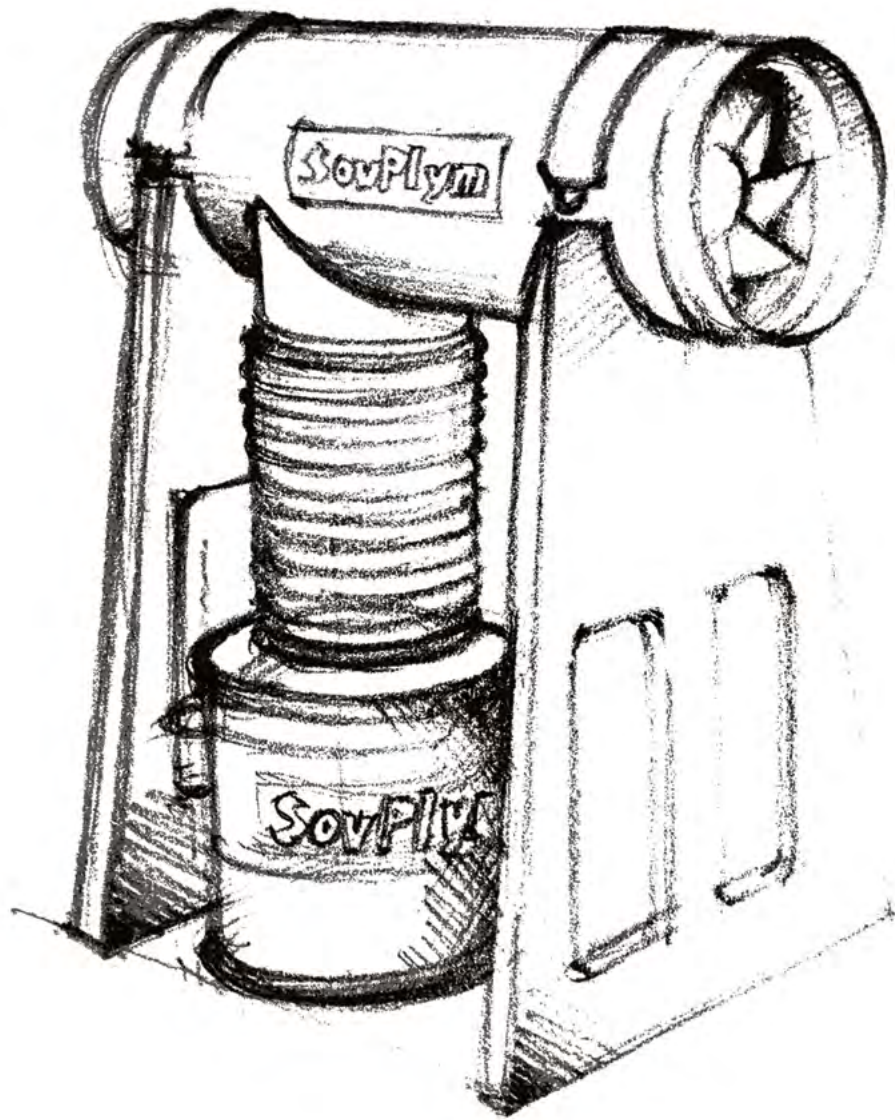






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# Material separation







# PRODUCT GUIDE



## CP

Direct flow cyclone for separation of coarse and medium-sized dust. Separation efficiency up to 99%. Serves as dust collector or effective pre-filter. Mounted horizontally into the air duct system.



## VPS

Vertical pre-separator for heavy dusts and materials, like as metal shots. Used as an efficient first stage of filtration in extraction systems.



## SVP

Stationary extraction panel. Ideal for grinding and polishing of large parts. Modular structure – several SVP can be combined for increased capacity. Requires fine filter and extraction fan.



## PU

Stationary dust collector for grinding and sharpening machines. Cyclone plus effective filter system ensures high filtration efficiency. Equipped with manual filter cleaning.



# CP Direct flow cyclones



## Description

Direct flow cyclones of CP series are designed for separation of the dust from airflow and installed as a part of air duct system. These cyclones are suitable for separation of any kind of dry non-sticky dust. For abrasive dusts application a reinforced CPu unit is available. CP and CPu units are installed horizontally directly into the air duct and recommended to be used as preliminary stage of filtration before the fine filter filtration. Air speed in the air duct with installed CP or CPu cyclone should exceed 12 m/s. Maximal allowed temperature of airflow is 110 °C. Cyclones provide limited protection of filtration equipment against sparks serving as a spark arrester.

## Industries and applications

- Dry coarse dust separation (pre-filter unit)
- Limited spark protection
- Abrasive dust separation (CPu series)
- Coarse filter

## Features

- Robust and reliable design
- Compatible with air ducts of standard diameters
- Simple installation, no additional space required
- Suitable for abrasive dust (BCPu unit)
- Environmental resistant powder coating

## Restrictions




- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite

## Article numbers / Technical characteristics

Article №	Model	Recommended airflow,m³/h	Air duct diameter, mm	Separation efficiency for medium quartz dust particles, %	Separation efficiency for coarse quartz dust particles, %	Weights, kg
5557	CP-1000	1000	160	80-88	92	6,7
5690	CPu-1000	1000				13,4
5555	CP-2500	2500	250			15,7
5691	CPu-2500	2500				31,4
5611	CP-4000	4000	315			25,5
5692	CPu-4000	4000				51



## Spare filter elements and accessories

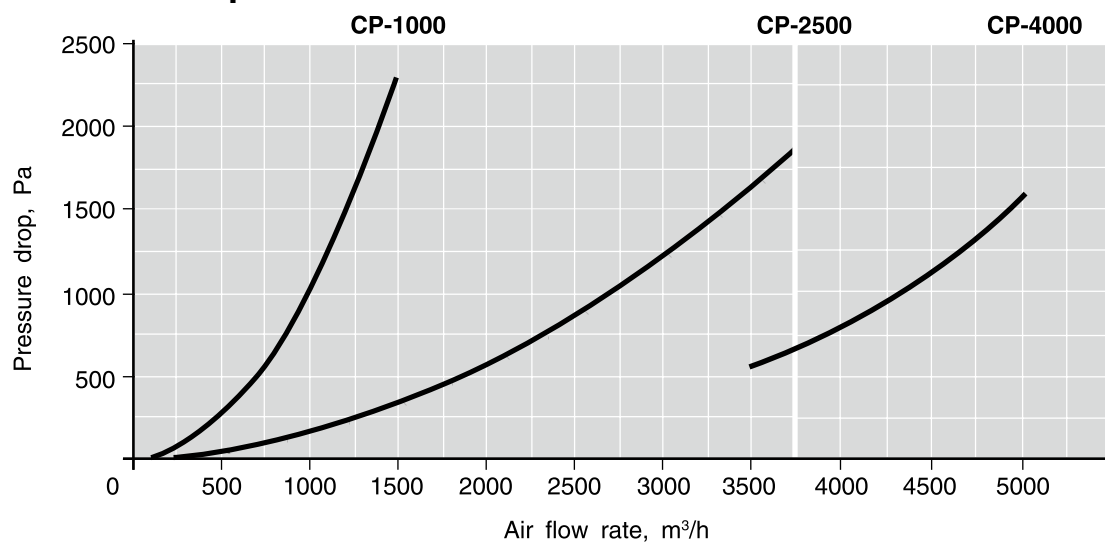
	Model	Description
	sKC	Cyclone body, thickness 1,5 mm
	sKCu	Reinforced cyclone body, thickness 3 mm
	sOC	Floor stand complete
	sDB	Dust bin, 40l

## Cyclones with floor stands, complete sets

Article №	Model	Delivery set
5500	CPO-1000	sKC-1000, sOC-1000, sDB-40-160
5693	CPOu-1000	sKCu-1000, sOC-1000, sDB-40-160
5556	CPO-2500	sKC-2500, sOC-2500, sDB-40-250
5694	CPOu-2500	sKCu-2500, sOC-2500, sDB-40-250
5626	CPO-4000	sKC-4000, sOC-4000, sDB-40-250
5695	CPOu-4000	sKCu-4000, sOC-4000, sDB-40-250



## Pressure drop





# VPS Vertical pre-separator



## Description

Vertical pre-separators of VPS series are designed for separation of the dust from airflow. They are recommended to use as preliminary stage of filtration installed before main filters of DCSC series or others, to reduce dust concentration at main filter inlet and prolong the life of filter elements. These pre-separators are suitable for separation of any kind of dry non-sticky dust. Separation efficiency heavily depends on the dust particles sizes and airflow. Usually it varies from 60% to 90%.

## Industries and applications

- Sand blasting
- Blasting
- Abrasive materials handling
- Grinding
- Material transportation
- Unloading of bulk materials

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite

## Features

- Robust and reliable design
- Suitable for abrasive dust (BCPu unit)
- Environmental resistant powder coating
- Prolongs life of filter elements
- Can be used as a filter for coarse dust
- Reduces wear of tubing and air ducts

## Article numbers / Technical characteristics

Article №	Model	Airflow, m <sup>3</sup> /h	Pressure drop (at stated airflow, Pa)	Inlet/Outlet diameters, mm
5416	VPS-2	2000	50	250/250
5417	VPS-4	4000	200	315/315
5418	VPS-6	6000	500	400/400

# SVP-5000 Stationary extraction panel



## Description

SVP-5000 stationary panel is designed for extraction and separation of dry coarse and medium size dust. Panel effectively captures dust at a distances of up to 1,5 m. During the work process operator should position himself in front of the panel facing it. To facilitate the work and positioning of the parts it is recommended to use turning console or support. SVP-5000 panel must be connected to the extraction ventilation system with fan of appropriate capacity. It is highly recommended to use appropriate SovPlym filter unit in the extraction ventilation system.

## Industries and applications

- Grinding of welded surfaces
- Metal stain cleaning
- Surface treatment

## Features

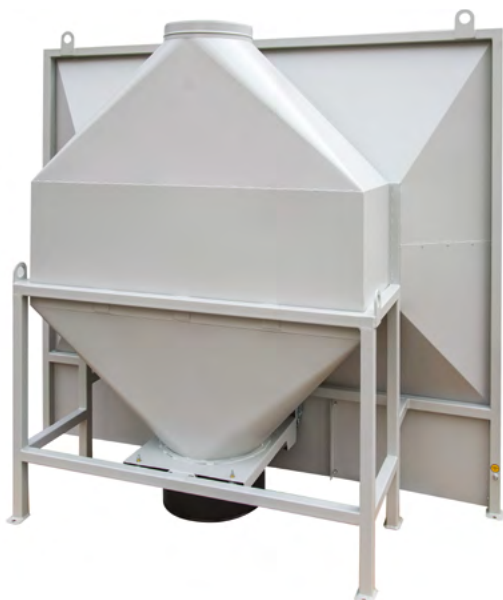
- Special shape of the panel ensures effective extraction
- Reduced airflow capacity required
- High separation efficiency, can be used as preliminary filter unit
- Easy installation, additional mountings are not required

## Restrictions

- Not suitable for extraction of dust or aerosols of explosive substances or aggressive vapors and gases

## Technical characteristics

Diameter of air duct being connected, mm	Dimensions of uniform suction panel, mm	Dimensions of suction hood, mm	Height of suction panel inlet central axis above the floor, mm	Effective cross-section of uniform suction panel, m <sup>2</sup>	Recommended air flow rate, m <sup>3</sup> /h	Air flow velocity through uniform suction panel, m/s	Dust bin capacity, dm <sup>3</sup>	Suction dimensions: width/length/height, mm	Weight, kg
315	350x1200	1450x2000	1000	0,154	5000	9	20	640x2000x1800	132





# PU Dust collector



## Description

Robust and compact PU Dust Collector equipped with cleanable bag filters is designed for extraction of coarse and fine dust from various metalwork applications such as sharpening, grinding and blasting. It is also suitable for other types of applications for extraction of dry, non-explosive and non-sticky dust. Filtration efficiency of PU Dust Collectors for the coarse dust is up to 92%.

## Industries and applications

- Metalwork
- Construction materials
- Food industry
- Chemical industry
- Engineering
- Automotive industry

## Features

- 2-stage filtration
- Manual filter cleaning system
- Low lifetime costs
- Free standing unit
- Compatible with fans of different capacities

## Restrictions

- Not suitable for extraction of explosive mixtures as well as for dust that tend to smolder or self-ignite
- Max temperature of extracted air is +80 °C.

## Article numbers / Technical characteristics

Article №	Model	Max airflow, m <sup>3</sup> /h	Max pressure drop, Pa	Filter surface, m <sup>2</sup>	Inlet/outlet diameter, mm	Weight, kg
5511	<b>PU-800</b>	800	1000	4,2 (16 sleeves Ø100 mm)	160/160	50
5512	<b>PU-1500</b>	1500	1100	5,0 (19 sleeves Ø100 mm)	160/250	70
5513	<b>PU-2500</b>	2500	1100	8,2 (31 sleeves Ø100 mm)	250/250	90
5514	<b>PU-4000</b>	4000	1200	9,8 (37 sleeves Ø100 mm)	280/250	100

## Applications / Installations





Our commitment:

happy  
healthy  
customers

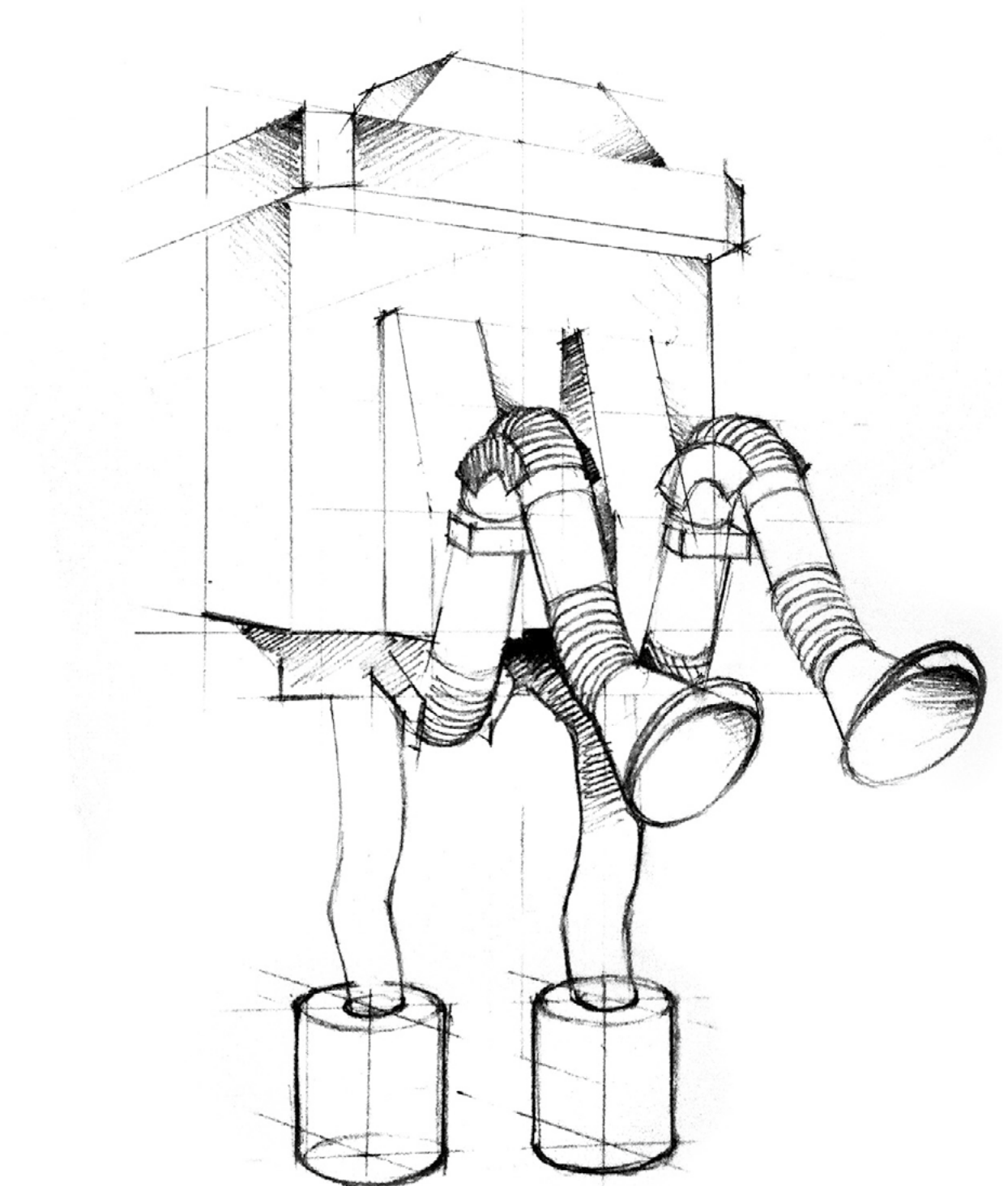






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# Filtration principles





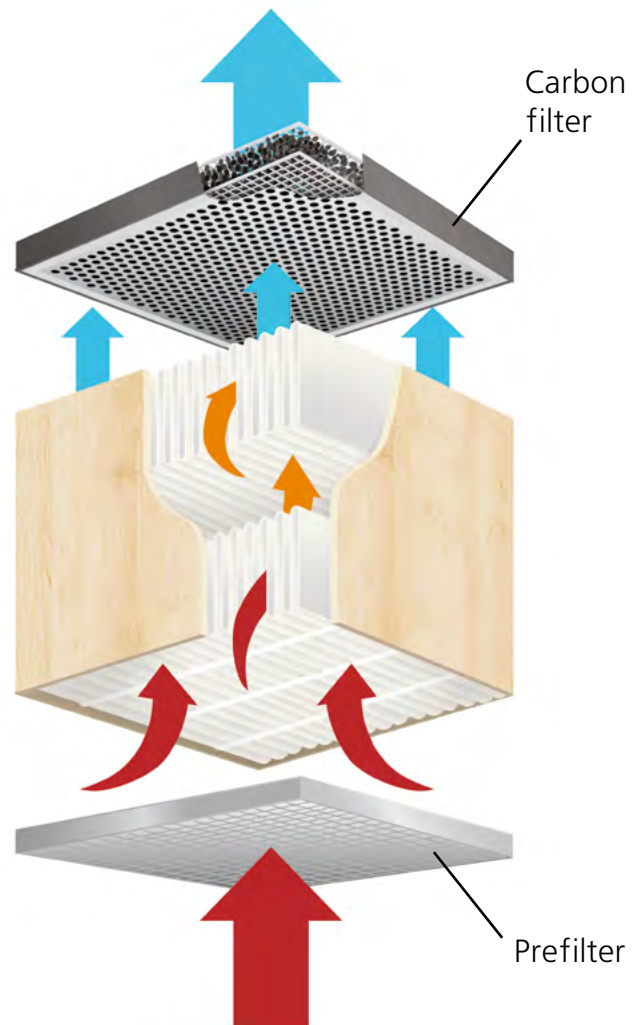
# Principles of air filtration

## 1. MECHANICAL, NON-CLEANABLE DUST FILTERS

These filters allow collection of dust particles on the surface of the filter media. The choice of filter media depends on dust properties and the required final cleaning class. The filtering elements (cartridges or pocket) are made with pleated (corrugated) filter media to achieve maximum dust holding capacity. Filtering elements can normally not be reused; they may be cleaned outside the unit or replaced when full. These filters are mainly used for processes with low dust concentration.

**Advantages:** low initial cost of equipment.

**Disadvantages:** non-cleanable filtering elements, need replacement upon reach certain pressure resistance.



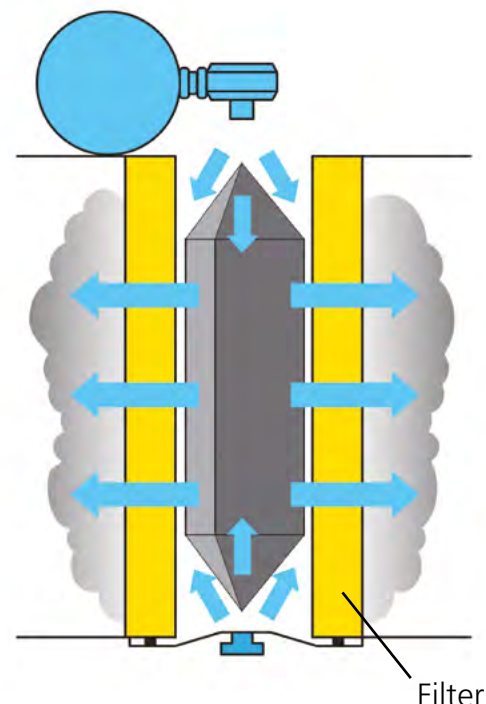
## 2. SELF-CLEANING DUST FILTERS

These filters use the same dust collection principle of collecting the dust as for mechanical filters. However they are equipped with an automatic self-cleaning system for filtering elements. Cleaning is carried out using short impulses of compressed air forced over a diffuser that so it rapidly fills the inside of the filter element and equally and efficiently cleans the entire surface. This technique, reduces the compressed air consumption by 50%. Different filter elements, round or flat pleated cartridges or smooth pockets or sleeves are used in the self-cleaning filters.

Cartridge material is corrugated to increase the area of the filtering surface.

**Advantages:** longer life of cartridges, suitable for heavy-duty conditions and high dust concentrations.

**Disadvantages:** requires compressed air, noise from self-cleaning system.

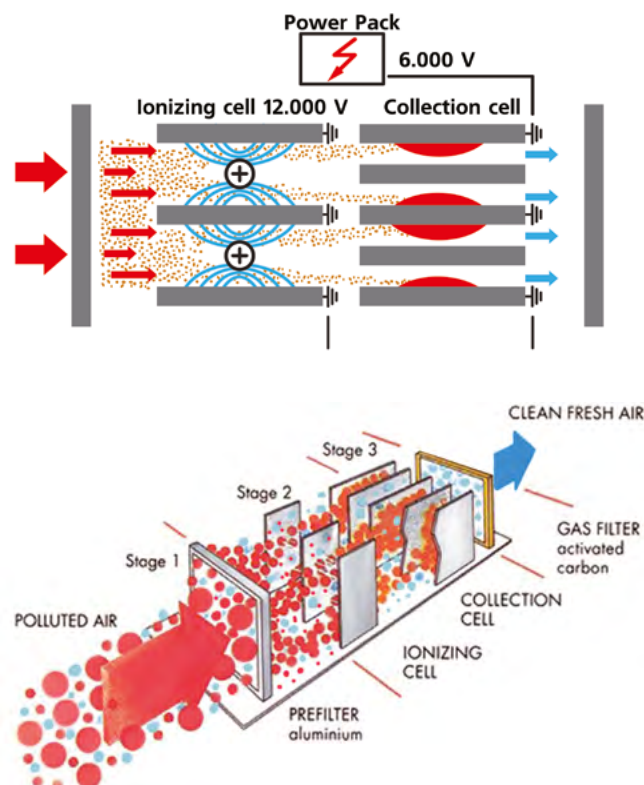


### 3. ELECTROSTATIC FILTERS

Electrostatic filtration is a very efficient method of filtration for extremely small particles. It cleans the air from particles down to the size of a virus – 0,005 microns, up to a straw of hair – 100 microns. Larger particles are to be separated before in a mechanical prefilter. The tungsten wires in the ionizing cell charge the particles in the airflow with 12.000 Volts, efficiently drawing them to the negatively charged collector plates in the collection cell. Remaining gases and odours can be separated by an active carbon filter after the collection cell.

**Advantages:** no need to replace filtering elements. The filters catch particles down to a size of 0,005 microns, destroy bacteria, suitable for oil smoke, and welding on oily metals.

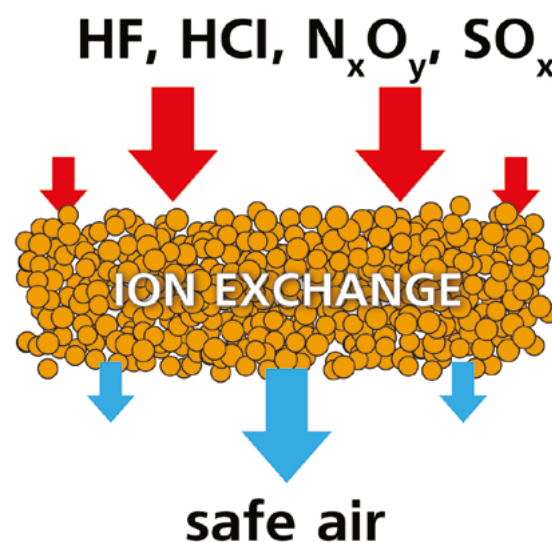
**Disadvantages:** ionization and precipitation cells need washing. Not suitable for metal dust, not suitable for heavy duty conditions due to low dust holding capacity.



### 4. GAS FILTERS

#### 4.1. Ion filters

The ion exchange process takes place as the air flow is filtered through an ion-exchange resin in the filter element. Toxic molecules, from various types of gases, are captured here (neutralized) by active groups of ion-exchange fiber. They hereafter stay fixed to the filter as a non-hazardous compound.

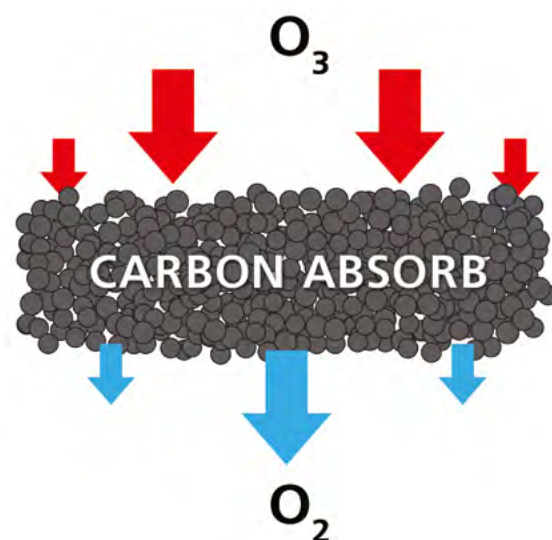


#### 4.2. Carbon filters

Active carbon filters neutralize smells and odours, ozone gas and other pollutants. They work on the principle of absorption, i.e. active carbon absorbs the molecules of the harmful substances.

**Advantages:** low cost, simple service. Greatly reduce even the smallest contaminants and particles, reducing harmful substances.

**Disadvantages:** need to replace the filter elements, requires pre-cleaning of gases from dust.





# Filter media solutions

SovPlym offers a range of different filter cartridges for various applications and materials. Selection of proper filter media is extremely important to ensure safety and health of employees as well as filtration efficiency and longer lifetime of filter unit.

SovPlym mainly uses three types of filtration materials:

- Polyester (standard)
- Aluminum coated Polyester (antistatic)
- PTFE membrane Polyester (EvoSmart™ Nano)

## NEW GENERATION FILTER MEDIA SETS NEW STANDARDS

EvoSmart™ Nano is the most advanced and modern filter media solution that is recommended for most of the industrial applications and dusts. The technology behind this innovative material is a special PTFE membrane that is applied to high quality polyester by using special technology. EvoSmart™

Nano filter cartridges brings several significant advantages over other filters:

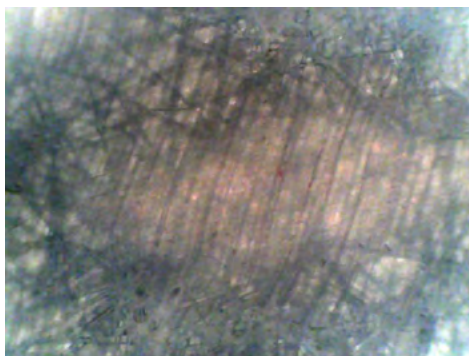
- Reduced airflow resistance and pressure drop;
- Higher filtration efficiency for smallest particles;
- Less dust adherence;
- Increased lifetime and cleaning efficiency;
- Certified to meet the standards from FDA 21 CFR and EU VO 10-2013.



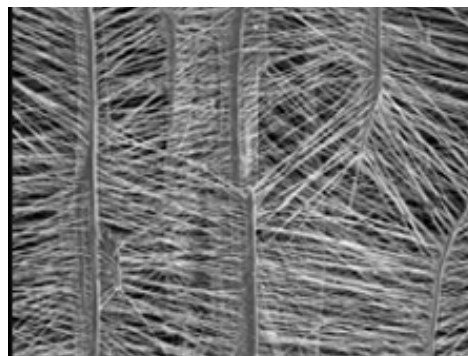
Regular Polyester x200



Regular Polyester x500



EvoSmart™ Nano x200

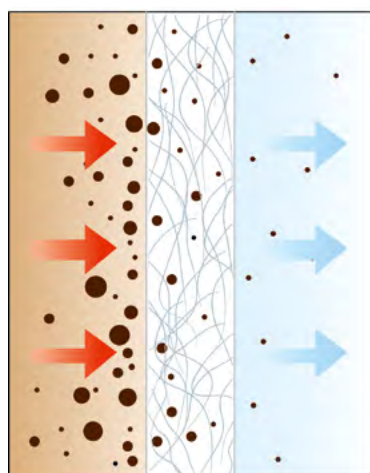


EvoSmart™ Nano x500

The difference between standard Polyester filter media and EvoSmart™ Nano material can be clearly seen on the above photos made by SovPlym testing laboratory.

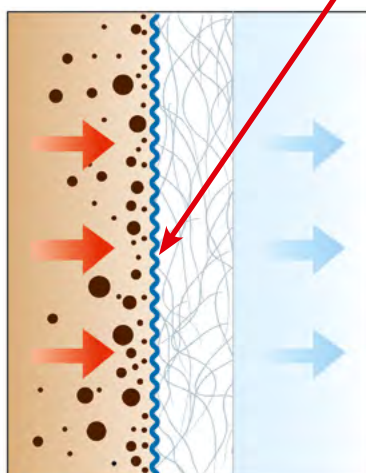
The PTFE membrane prevents smaller particles of sizes down to 0,1 µm from entering the inner layers of the filtration media and getting stuck in there. The result is a significantly longer filter lifetime with better performance and less energy consumption.

On the illustration, the membrane is shown with the curved line.



Regular polyester filter media.

Particles penetrates deep into the filter and get stuck there.



EvoSmart TM Nano filter media. Even nanoparticles are caught on the filter surface. Brings longer lifetime and are easy to clean.

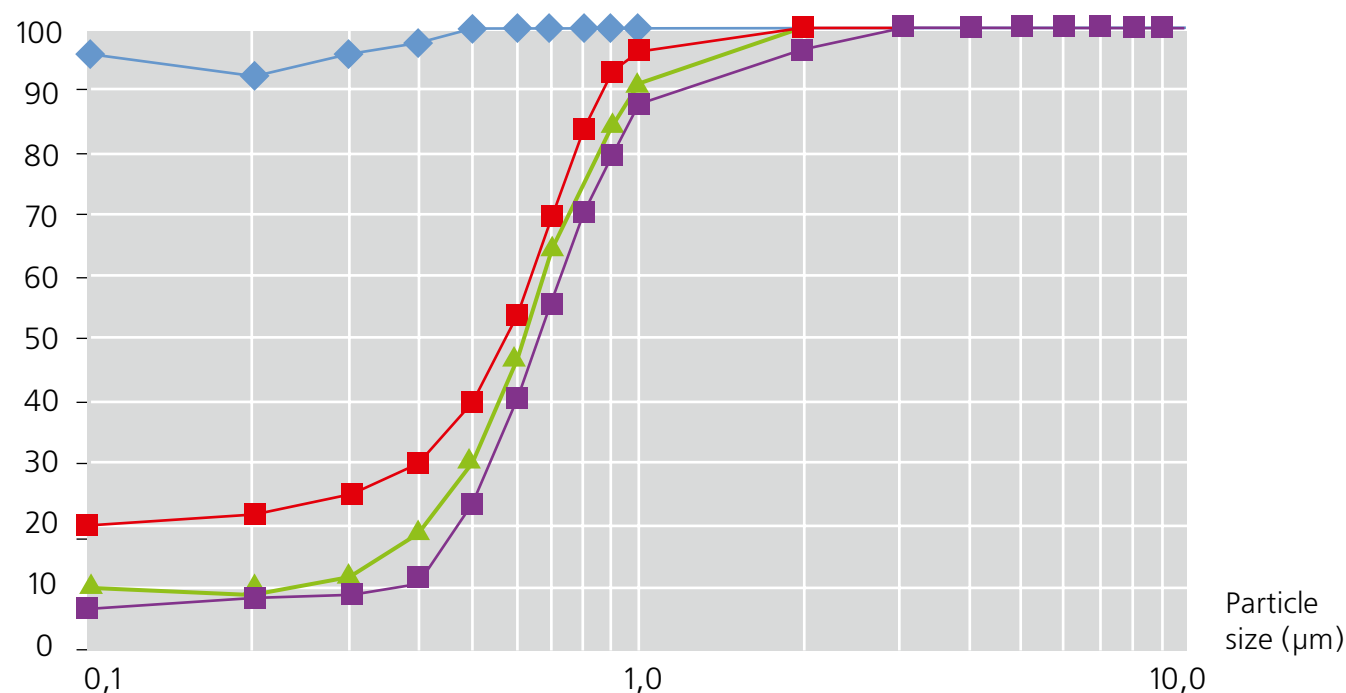
The EvoSmart™ Nano stands in an efficiency class of its own. The capture rate is 99,5% for particles sizes from 0,1 to 3 µm which is the top test results (results shown on the diagram

below). These particle size are the most dangerous for health as they are inhaled and can get stacked in the lungs provoking serious health issues and diseases.

## DUST REMOVAL MATERIALS DIAGRAM

- ◆— ePTFE PTFE membrane Polyester (EvoSmart™ Nano)
- PET 270 g/m<sup>2</sup>
- ▲— PET 240 g/m<sup>2</sup>
- PET 180 g/m<sup>2</sup>

Efficiency (%)





## 1. PLEATED FILTER CARTRIDGES (ROUND ALT. CONICAL)

The round pleated cartridges are optimal filter elements for processes with dust concentration less than  $2\text{-}5\text{ g/m}^3$ . They combine the largest filtration surface with minimal measurements. Perfect for compact size units, with maximal performance and efficiency. Conical cartridges have all the properties of the round but are designed for SovPlym high vacuum filter units. These filter bring a higher cyclonic and airflow effect in the high vacuum pre-filtration stage.



## 2. FLAT PLEATED CARTRIDGES

Flat cartridges are designed for vertical filtration systems and feature the small pleats and an increase distance between them. Suitable for the most difficult industrial application with initial dust concentration of up to  $20\text{ g/m}^3$ .



## 3. POCKET TYPE AND SLEEVE TYPE FILTER ELEMENTS

The sleeve type filters are suitable for fibrous or sticky types of dust and normally are used in units with manual shaking or compressed air pulse type of cleaning. For oil mist, self-draining pocket filters, are the best alternative when the oil mist may contain metal dust or similar types of solid pollutants.

Special pocket filters are used in ion-exchange units for cleaning hazardous gas components. Types of fabric and the ion exchange compounds are selected according to the application and exact gas components to be cleaned.



## 4. NON-CLEANABLE FILTER ELEMENTS

These filter elements are normally used for temporarily or short-term jobs, or for low dust intensity.

All HEPA filter elements are non-cleanable and should therefore only be installed after a filtration stage, in order to avoid quick clogging and a short lifetime.



## 5. PRE-FILTER ELEMENTS

Pre-filter elements normally are flat cartridges with a non-woven filling, like aluminum perforated net or stainless mesh net. Filtration class of all pre-filter units – G4. The purpose of these filters are to protect the main fine filter elements from coarse dust particles and other pollutants. Usually pre-filter elements are washable, cleanable and can be used multiple times.



## 6. WASHABLE ELECTROSTATIC FILTER ELEMENTS

During the electrostatic filtration dust particles first get charged in the ionization cell and then attracted to the plates in the precipitation cells. Ionization and precipitation cells as filter elements have a number of advantages:

- Cells can be washed unlimited number of times;
- Capture the smallest dust particles, even bacteria;
- Perfect for welding of oily metal applications;
- Effective filtration of oil smoke.

Electrostatic filter cell elements cannot be used with any type of metal dust in the airflow. Also an increase air volume will result in lower efficiency due to the electrostatic filtration principle.



## 7. ACTIVE CARBON FILTER CARTRIDGES

Active carbon cartridges are specially designed as a final filtration stage of odors and remaining gas components from welding and smoldering.

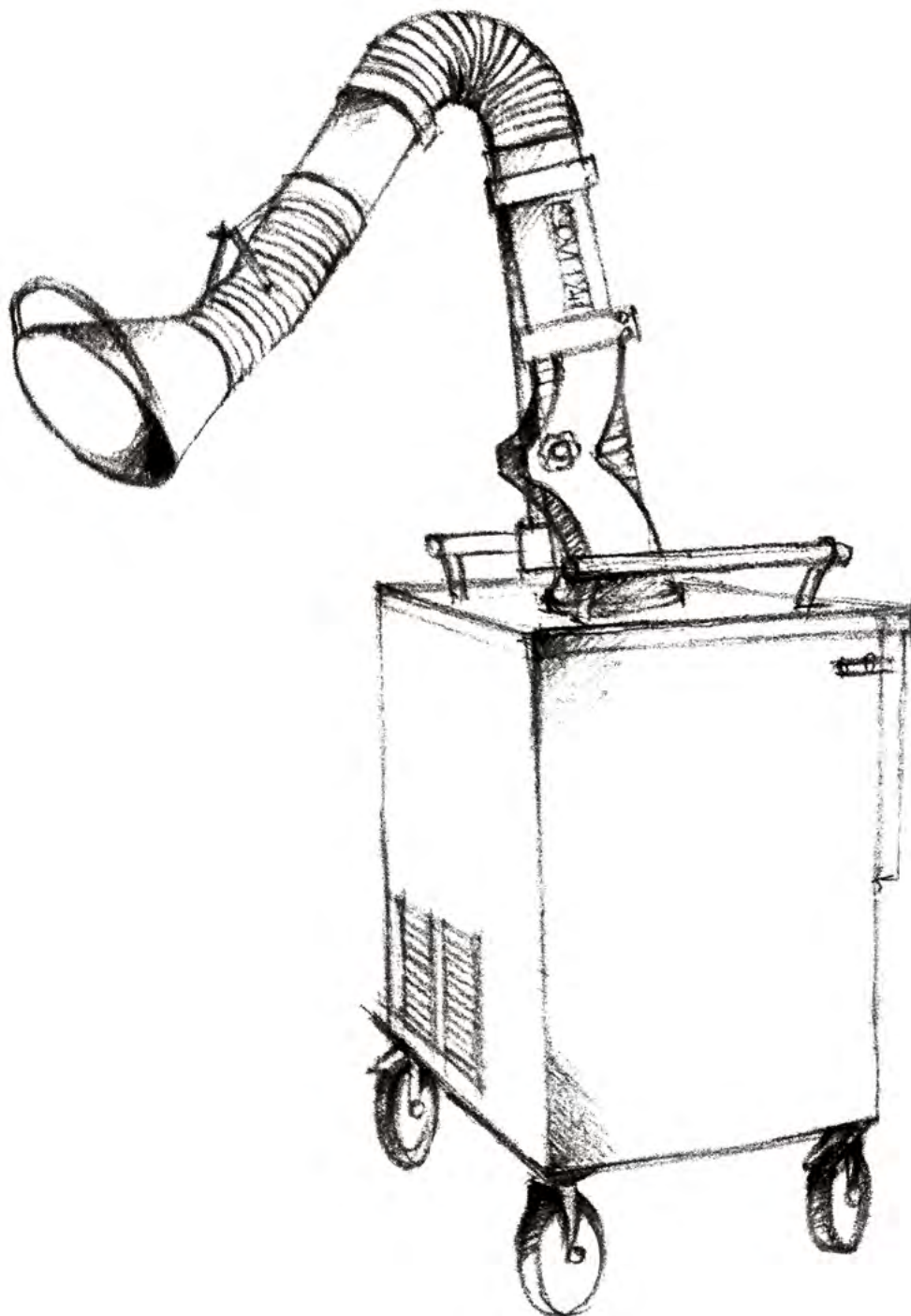






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# Mobile Filters







# PRODUCT GUIDE



## DCA-P-200

Portable filter unit for soldering fumes or similar. Comes with carbon filter cartridge. Perfect combination with LabArm.



## DCA-P-400

Portable filter with increased capacity to handle fumes from two work-stations. Equipped with carbon filter cartridge. Suitable for 2 LabArms.



## DCA-M

Mobile filter unit for low intensity dust and soldering fumes. Robust design and long filter life.



## ESP-M

Electrostatic mobile filter. Optimal solution for temporary welding and welding of oily metals.



## DCSC-M-1

Self-cleaning mobile filter. Suitable for intense non-stationary welding. Needs compressed air supply.



## DCSC-M-2

Self-cleaning mobile filter. High capacity for one/two non-stationary welding posts. Requires external compressed air supply.



## DCSC-M-2-K

High capacity mobile self-cleaning filter. Suitable for one/two non-stationary welding posts. Built in air compressor serving the automatic self-cleaning system.



## DCSC-M-3

Self-cleaning mobile filter for work inside tanks, cisterns or other closed areas. Up to 3 welding posts. Built-in filter cleaning system. Requires compressed air supply.

SovPlym



# DCA-P-200 Portable filtration unit



## Description

DCA-P-200 is a portable mechanical filter unit designed for temporary extraction of welding and soldering fumes and light dusts of low concentration. It is well suited for occasional works and temporary workplaces. Low weight of the DCA-P-200 unit allows to easily move it from one workstation to another if needed therefore providing great flexibility and economy in comparison with stationary ventilation solutions.

## Industries and applications

- Occasional welding processes
- Light dust extraction
- Soldering

## Features

- Simple and robust design
- Low weight, portable
- Reduced level of noise
- 220 V plug and play unit
- Delivered with carbon filter
- Compatible with extraction arms of small diameters

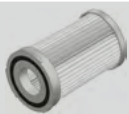
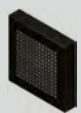
## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for continuous operation and for high-intensity applications
- Not suitable for materials that tend to smolder or self-ignite

## Article numbers/Technical characteristics

Max airflow, m <sup>3</sup> /h	Filtration surface, m <sup>2</sup>	Filtration class	Power consumption (220V), kW	Noise level, dB	Number of connections	Weight, kg
175	0,5	F9 (DIN EN 779), MERV 15 (ASHRAE 52.2)	1	71	1 x 100 mm	10

## Spare filter elements and accessories

	Article №	Model	Description
	6379	sDCA-P-002*	Spare filter cartridge for DCA-P-200
	6378	sKKF	Carbon filter for DCA-P-200

\*Four sDCA-P-002 are required for filter change procedure.

# DCA-P-400 Portable filtration unit



## Description

DCA-P-400 is a portable mechanical filter unit designed for temporary extraction of welding and soldering fumes and light dusts of low concentration. It is well suited for occasional works and temporary workplaces. Low weight of the DCA-P-400 unit allows to easily move it from one workstation to another if needed therefore providing great flexibility and economy in comparison with stationary ventilation solutions. DCA-P-400 has two modes of operation that allows to vary capacity of the unit if necessary.

## Industries and applications

- Occasional welding processes
- Light dust extraction
- Soldering

## Features

- Simple and robust design
- Low weight, portable
- Reduced level of noise
- 220V plug and play unit
- Delivered with carbon filter
- Compatible with extraction arms of small diameters



## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for continuous operation and for high-intensity applications
- Not suitable for materials that tend to smolder or self-ignite

## Article numbers/Technical characteristics

Max airflow, m <sup>3</sup> /h	Filtration surface, m <sup>2</sup>	Filtration class	Power consumption (220V), kW	Noise level, mode 1/2, dB	Number of connections	Weight, kg
350	4,5	F9 F9 (DIN EN 779), MERV 15 (ASHRAE 52.2)	2	64/73	2 x 100 mm	16

## Spare filter elements and accessories

	Article №	Model	Description
	10142	sDCA-P-004	Spare filter cartridge for DCA-P-400
	6348	sDCA-P-005	Carbon filter for DCA-P-400



# DCA-M Mobile Filter Unit



## Description

Mobile filter unit DCA-M is designed for extraction and cleaning of welding and soldering fumes as well as for fine dust generated by grinding processes. Due to its capacity, usage of DCA-M is recommended for temporary works or low intensity applications. ESP-M units are supposed to be used with one standard extraction arm, which is ordered separately. In addition to long-life fine filtration cassette, DCA-M can be equipped with additional carbon filter cartridge to absorb gaseous substances and odors.

## Industries and applications

- Welding processes
- Dust extraction
- Soldering

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for continuous operation and for high-intensity applications
- Not suitable for materials that tend to smolder or self-ignite

## Features

- Simple and robust design
- Big dust capacity of the filter
- Easy movement of the unit
- 220 V and 380 V units available
- Additional carbon filter (option)
- Compatible with all standard extraction arms

## Article numbers / Technical characteristics

Article №	Model	Max airflow, m <sup>3</sup> /h	Filtration surface, m <sup>2</sup>	Filtration class	Power consumption, kW	Weight, kg
5352	DCA-M-1200 (220V)	1000	25	F9	1,1	100
5353	DCA-M-1200 (380V)					

## Extraction arms suitable for DCA-M filters

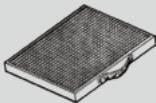
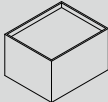
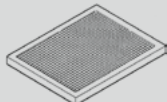
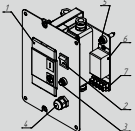
Article №	Model	Reach area, m	Built-in light
5359	BEA-M-2S	2	-
6130*	BEA-M-2SL		with light
5361	BEA-M-3S	3	-
6131*	BEA-M-3SL		with light

## Delivery set / Standard kit info

- Built-in fan
- 4x castors
- Power cable with plug
- Control panel
- Filter cartridge

\*For extraction arms with built-in light additional lighting kit (art. 6053) is required. See list of accessories on the next page.

## Spare filter elements and accessories

	Article №	Model	Description
	6389	sCF-002	Carbon filter for DCA-M
	11121	sMK-002	Spare filter cartridge for DCA-M
	6387	sFF-3000	Washable aluminum mesh pre-filter for DCA-M
	6053	sL-DCA-M	Lighting kit for DCA-M





# ESP-M Mobile Electrostatic Filter



## Description

Mobile electrostatic filter ESP-M is designed for extraction and cleaning of welding fumes and fine non-metallic dust with particle sizes down to 0,05 microns. Due to its capacity, usage of ESP-M is recommended for temporary works or low intensity applications. ESP-M units are supposed to be used with one or two standard extraction arms, which are ordered separately. In addition to long-life electrostatic filtration system, ESP-M can be equipped with additional carbon filter cartridge to absorb gaseous substances and odors.

## Industries and applications

- Welding processes
- Dust extraction
- Soldering

## Restrictions

- Not suitable for extraction of any type of metallic dust
- Not suitable for continuous operation and for high-intensity applications
- Not suitable for welding fume extraction of aluminum or other non-ferrous metals

## Features

- Built-in alarm system
- Low lifetime costs
- Big reliable wheels and castors
- Washable filtration cells
- Additional carbon filter (option)
- Compatible with all standard extraction arms

## Article numbers / Technical characteristics

Article №	Model	Max airflow, m <sup>3</sup> /h	Filtration surface, m <sup>2</sup>	Cleaning efficiency	Number of connections for extraction arms	Weight, kg
5473	ESP-M-1600c	1500	16,4	92%	1	120
5475	ESP-M-2-1600c				2	

## Extraction arms suitable for EMK filters

Article №	Model	Reach area, m	Built-in light
5359	BEA-M-2S	2	-
6130	BEA-M-2SL		with light
5361	BEA-M-3S	3	-
6131	BEA-M-3SL		with light
5363	BEA-M-4S	4	-
6132	BEA-M-4SL		with light

## Delivery set / Standard kit info

- Built-in fan
- 2 x wheels
- 2 x castors
- Flange for extraction arm connection
- Power cable with plug (220 V)
- Control panel
- Ionization cell
- Precipitation cell

# Breathe deeply

We work to bring solutions for air pollution control inside production facilities, bringing care of employees health and improved work efficiency and environmental care.





# DCSC-M-1 Mobile self-cleaning filter



## Description

DCSC-M-1 is a versatile mobile filter unit designed for extraction of dust and fumes from temporary or mobile workstations. DCSC-M-1 is equipped with filter cleaning system of high efficiency that allows cleaning the filter cartridge of the unit without interruption of working process. Filter cleaning system requires connection to external compressed air supply. DCSC-M-1 unit is suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Industries and applications

- Welding fumes
- Light dry dust applications

## Limitations

DCSC-M-1 is not suitable for extraction of dust generated by sand-paper and other paper-based abrasives grinding or polishing applications. Unit is not suitable for operation in the presence of dust or aerosols of explosive substances or aggressive vapors and gases.

## Features

- Built-in filter cleaning system
- Big and reliable castors
- Compact size and mobility
- Can be used with different types of filter cartridges
- Solid design
- Extraction arms of different length are available

## Article numbers / Technical characteristics

Article №	Model	Max airflow, m <sup>3</sup> /h	Filtration surface, m <sup>2</sup>	Filtration class	Power consumption, kW	Weight, kg
27821	DCSC-M-1-A12	1200	12	F9	1,2	200
27823	DCSC-M-1-T12					
27829	DCSC-M-1-T10		10			



## Delivery set / Standard kit info

- Built-in fan
- Spark arrester
- Power cable with plug
- Control panel
- Filter cartridge
- Oil separator with reduction box for compressed air supply

**NOT INCLUDED** in the delivery: extraction arm, air compressor, differential gauge. **ORDER SEPARATELY.**

## Extraction arms suitable for DCSC-1

Article №	Model	Reach area, m	Description
5359	BEA-M-2S	2	Standard extraction arm, diameter 160 mm without working light.
6130	BEA-M-2SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for working light switching. 2-nd button is intended for DCSC-M switching.
5361	BEA-M-3S	3	Standard extraction arm, diameter 160 mm without working light.
6131	BEA-M-3SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for working light switching. 2-nd button is intended for DCSC-M switching.
5363	BEA-M-4S	4	Standard extraction arm, diameter 160 mm without working light.
6132	BEA-M-4SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for working light switching. 2-nd button is intended for DCSC-M switching.

## Spare filter elements

Cartridge type (index)	Application area	Features
<b>Standard cartridges, 12 m<sup>2</sup></b>		
<b>Pcart-12</b>	Dust with particle size over 0.5 µm.	Preliminary coating by sPreco-N is recommended (500 to 1000g per 1 cartridge). It is essential to control and keep the recommended air flow.
	Welding aerosols	Preliminary coating by sPreco-N is required (500 to 1000g per 1 cartridge). It is essential to control and keep the recommended air flow.
<b>Acart-12</b>	Dust with particle size over 0.5 µm prone to electrostatic charge accumulation.	Preliminary coating by sPreco-N is recommended (500 to 1000g per 1 cartridge). It is essential to control and keep the recommended air flow.
<b>Tcart-12</b>	Welding aerosols. Sublimates, soldering fumes. Various types of dust with majority of fine fraction (Dust with particle size less than 0.5 µm).	Preliminary coating is not necessary. For heavy duty applications. Higher speed of filtration is allowed. Longer cartridge life-time.
<b>Special cartridges, 10 m<sup>2</sup></b> For very rough working conditions.		
<b>Tcart-10</b>	Welding aerosols. Sublimates, soldering fumes. Various types of dust with majority of fine fraction (Dust with particle size less than 0.5 µm).	For extra heavy applications. Higher speed of filtration is allowed. Longer cartridge life-time.



# DCSC-M-2 Mobile self-cleaning filter



## Description

DCSC-M-2 is a versatile mobile filter unit designed for extraction of dust and fumes from a temporary or mobile workstations. Capacity of the unit is enough for two extraction arms. DCSC-M-2 is equipped with filter cleaning system of high efficiency that allows cleaning filter cartridge of the unit without interruption of working process. Filter cleaning system requires connection to external compressed air supply. DCSC-M-2 unit is suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Industries and applications

- Welding fumes
- Light dry dust applications
- Smells and welding gazes (with carbon filter)

## Limitations

DCSC-M-2 is not suitable for extraction of dust generated by sand-paper and other paper-based abrasives grinding or polishing applications. Unit is not suitable for operation in the presence of dust or aerosols of explosive substances or aggressive vapors and gazes.

## Features

- Built-in filter cleaning system
- Vertical positioning of filter cartridge
- Solid design
- Big and reliable castors
- Can be used with different types of filter cartridges
- Extraction arms of different lengths are available

## Article numbers / Technical characteristics

Article №	Model	Max airflow, m³/h	Filtration surface, m²	Filtration class	Power consumption, kW	Weight, kg
DCSC-M-2-160 (For one extraction arm with diameter 160 mm)						
5801	DCSC-M-2-160-A20	1650	20	M MERV	1.5	172
5803	DCSC-M-2-160-T20					
DCSC-2-2x160 (For two extraction arms with diameter 160 mm)						
5809	DCSC-M-2-2x160-A20	1980	20	M MERV	1.5	172
5811	DCSC-M-2-2x160-T20					
DCSC-2-200 (For one extraction arm with diameter 200 mm)						
5817	DCSC-M-2-200-A20	1800	20	M MERV	1.5	172
5819	DCSC-M-2-200-T20					

## Delivery set / Standard kit info

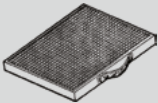

- Built-in fan
- Spark arrester
- Power cable with plug
- Control panel
- Filter cartridge
- Oil separator with reduction box for compressed air supply

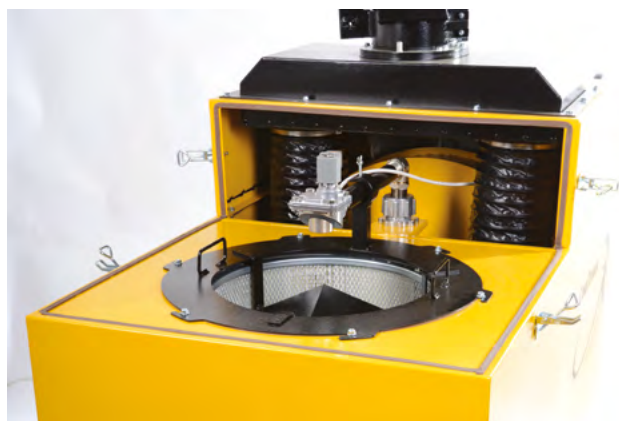
Extraction arm/arms are **NOT INCLUDED** and **NEEDS TO BE ORDERED SEPARATELY**.

## Extraction arms suitable for DCSC-M-2

Article №	Model	Reach area, m	Description
5359	BEA-M-2S	2	Standard extraction arm, diametr 160 mm without working light.
5311	BEA-200-2S		Standard extraction arm, diametr 200 mm without working light.
6130	BEA-M-2SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for working light switching. 2-nd button is intended for DCSC-M switching.
5361	BEA-M-3S	3	Standard extraction arm, diametr 160 mm without working light.
5312	BEA-200-3S		Standard extraction arm, diametr 200 mm without working light.
6131	BEA-M-3SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for working light switching. 2-nd button is intended for DCSC-M switching.
5363	BEA-M-4S	4	Standard extraction arm, diametr 160 mm without working light.
5313	BEA-200-4S		Standard extraction arm, diametr 200 mm without working light.
6132	BEA-M-4SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for switching of working light. 2-nd button is intended for DCSC-M switching.

## Spare filter elements

	Article №	Model	Description
	6100	sCF-DCSC-M-2	Carbon filter for filtration of smells and welding gazes
	6911	Acart-0-20	Spare filter cartridge, 20 m², antistatic
	6913	Tcart-0-20	Spare filter cartridge, 20 m², for heavy applications
	18079	sPreco-N	Pre-coating powder for filter cartridges. 1 kg
	7331	sPreco-N	Pre-coating powder for filter cartridges. 12 kg





# DCSC-M-2K Mobile self-cleaning filter



## Description

DCSC-M-2K is a versatile mobile filter unit designed for extraction of dust and fumes from a temporary or mobile workstations. Capacity of the unit is enough for two extraction arms. DCSC-M-2K is equipped with filter cleaning system of high efficiency that allows cleaning filter cartridge of the unit without interruption of working process. Built-in air compressor makes DCSC-M-2-K fully independent from external air supply, additional reduction box or moisture separator are not required. DCSC-M-2-K unit is suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Industries and applications

- Welding fumes
- Light dry dust applications
- Smells and welding gazes (with carbon filter)

## Limitations

DCSC-M-2-K is not suitable for extraction of dust generated by sand-paper and other paper-based abrasives grinding or polishing applications. Unit is not suitable for operation in the presence of dust or aerosols of explosive substances or aggressive vapors and gazes.

## Features

- Built-in filter cleaning system
- Vertical positioning of filter cartridge
- Built-in air compressor
- Big and reliable castors
- Can be used with different types of filter cartridges
- Extraction arms of different lengths are available

## Article numbers / Technical characteristics

Article №	Model	Filtration surface, m²	Filtration class	Weight, kg
DCSC-M-2-160-K (For one extraction arm with diameter 160 mm)				
5805	DCSC-M-2-160-K-A20	20	M	172
5807	DCSC-M-2-160-K-T20			
DCSC-2-2x160-K (For two extraction arms with diameter 160 mm)				
5813	DCSC-M-2-2x160-K-A20	20	M	172
5815	DCSC-M-2-2x160-K-T20			
DCSC-2-200-K (For one extraction arm with diameter 200 mm)				
5821	DCSC-M-2-200-K-A20	20	M	172
5823	DCSC-M-2-200-K-T20			

## Delivery set / Standard kit info

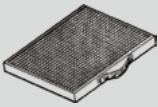

- Built-in fan
- Spark arrester
- Power cable with plug
- Control panel
- Filter cartridge
- Built-in compressor

Extraction arm/arms are **NOT INCLUDED** and **NEED TO BE ORDERED SEPARATELY**.

## Extraction arms suitable for DCSC-M-2K

Article №	Model	Reach area, m	Description
5359	BEA-M-2S	2	Standard extraction arm, diametr 160 mm without working light.
5311	BEA-200-2S		Standard extraction arm, diametr 200 mm without working light.
6130	BEA-M-2SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for working light switching. 2-nd button is intended for DCSC-M switching.
5361	BEA-M-3S	3	Standard extraction arm, diametr 160 mm without working light.
5312	BEA-200-3S		Standard extraction arm, diametr 200 mm without working light.
6131	BEA-M-3SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for working light switching. 2-nd button is intended for DCSC-M switching.
5363	BEA-M-4S	4	Standard extraction arm, diametr 160 mm without working light.
5313	BEA-200-4S		Standard extraction arm, diametr 200 mm without working light.
6132	BEA-M-4SL		Standard extraction arm with working light. The suction hood is equipped with two buttons: 1-st button is intended for switchnig of working light. 2-nd button is intended for DCSC-M switching.

## Spare filter elements

	Article №	Model	Description
	6100	sCF-DCSC-M-2	Carbon filter for filtration of smells and welding gazes
	6911	Acart-0-20	Spare filter cartridge, 20 m², antistatic
	6913	Tcart-0-20	Spare filter cartridge, 20 m², for heavy applications
	18079	sPreco-N	Pre-coating powder for filter cartridges. 1 kg
	7331	sPreco-N	Pre-coating powder for filter cartridges. 12 kg





# DCSC-M-3 Mobile self-cleaning filter



## Description

DCSC-M-3 is a versatile mobile filter unit designed for extraction of dust and fumes from a temporary or mobile workstations. Unit is specially designed for connection of three extraction hoses of small diameter (75 mm) for extraction of fumes and dust from hard-to-reach places such as ships holds, tanks, cisterns, tubes, wells etc. DCSC-M-3 is equipped with filter cleaning system of high efficiency that allow cleaning filter cartridge of the unit without interruption of working process. Filter cleaning system requires connection to external compressed air supply. DCSC-M-3 unit is suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Industries and applications

- Welding fumes
- Light dry dust applications

## Limitations

DCSC-M-3 is not suitable for extraction of dust generated by sand-paper and other paper-based abrasives grinding or polishing applications. Unit is not suitable for operation in the presence of dust or aerosols of explosive substances or aggressive vapors and gases.

## Features

- Built-in filter cleaning system
- Compact size and mobility
- Compatible with hoses up to 30 m
- Big and reliable castors
- Can be used with different types of filter cartridges
- Equipped with robust magnetic extraction nozzles

## Article numbers / Technical characteristics

Article №	Model	Max airflow, m <sup>3</sup> /h	Filtration surface, m <sup>2</sup>	Filtration class	Power consumption, kW	Weight, kg
27831	DCSC-M-3-A12	1200	12	M (DIN EN 60335) MERV 15 (ASHRAE 52.2)	1,2	200
27833	DCSC-M-3-T12					
27839	DCSC-M-3-T10		10			

## Delivery set / Standard kit info

- Built-in fan
- Spark arrester
- Power cable with plug
- Control panel
- Filter cartridge
- Oil separator with reduction box for compressed air supply
- Magnetic nozzles — 3 pcs

**NOT INCLUDED** in the delivery: extraction hoses, air compressor, differential gauge. **ORDER SEPARATELY.**

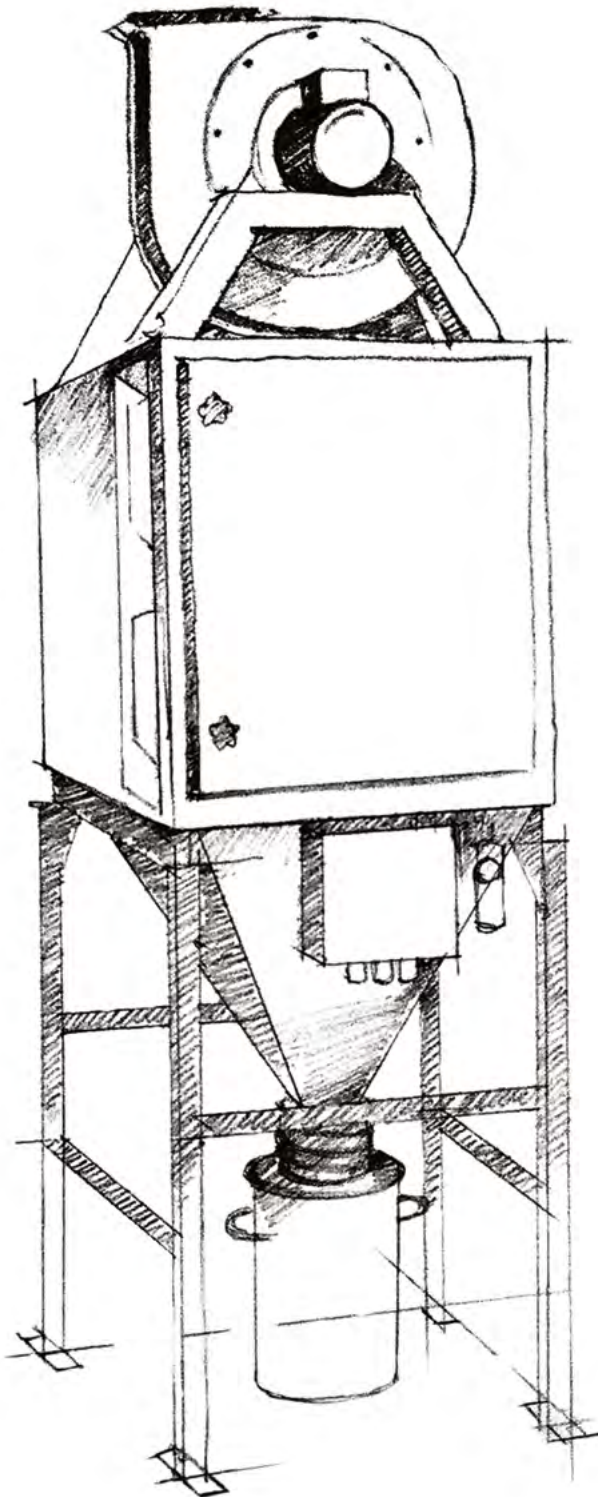






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# Stationary filters









# PRODUCT GUIDE



## ESP-2000

Wall-mounted electrostatic filter for single welding post with low intensity or oily metal welding. Washable filtration cells. Compatible with all standard extraction arms.



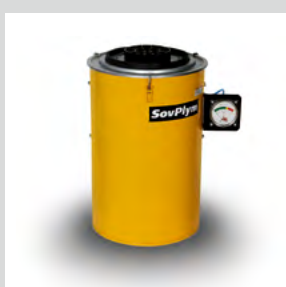
## ESP-3000

As ESP-2000 but with higher capacity. For one or two welding posts. Washable filtration cells. Requires appropriate fan.



## ESP-5000

High capacity wall-mounted electrostatic filter for 3-4 post of low intensity or oily metal welding. Washable filtration cells. Optional carbon and ion exchange filtration modules are available.



## MM

Small and compact oil mist filter. Installed directly on or beside the machine. Suitable for a wide range of oil based coolants.



## ESPO

Wall hanging electrostatic filter for oil smoke. For high viscosity oil based coolants with an oil concentration of 5% and more. Requires appropriate fan.



## MT-31/MT-32

Stationary bag filter for oil mist/smoke. Suitable for high viscosity oil based coolants that may contain metal dust. For continuous 1-2 shift operation.



## MT-41/MT-42

Stationary self-draining filter for oil mist/smoke. Suitable for clean low viscosity oil based coolants. For continuous 2-3 shifts operation.



## MT-3X/X (MT-31/X, MT-32/X)

Modular stationary bag filters for oil mist/smoke. Suitable for high viscosity oil based coolants that may contain metal dust. For continuous 1-2 shift operation.





### **MT-4X/X (MT-41/X, MT-42/X)**

Modular stationary self-draining filters for oil mist/smoke. Suitable for applications with clean low viscosity oil based coolants. For continuous 2-3 shifts operation.



### **DCSC-FMP**

Stationary filter with flat cartridges for heavy dust. Can be equipped with different types of filter media. Built-in filter self cleaning system. Several units can be combined for Increased capacity. Available with or without built-in fan.



### **SFB**

Self-cleaning automatic filter unit for dry loose dust with initial concentrations up to  $5 \text{ g/m}^3$ . Filtration area varies from 5 to  $56 \text{ m}^2$  depending on number of cartridges installed. For indoor and outdoor installations on top of silos and aspiration covers.



### **SFM**

Stationary filter unit for different kinds of dry, loose and not-self-ignitable dusts. Scalable modular design with filtration area up to  $180 \text{ m}^2$ . For indoor and outdoor installations. Equipped with mechanical stirring filter cleaning system. Stand-alone and bunker type units are available.



### DCA-W

Wall mounted filter for low intensity dust and soldering. Optional carbon filter cartridge is available.



### DCSC-S

Modular stationary filter for most dust applications. Unbeaten flexibility in capacity, design and configuration. Built-in pressure gauges and effective filter cleaning system. Needs compressed air supply and appropriate fan.



### DCSC-W

Wall mounted self cleaning filter for welding fumes and light dust. Available in different capacities and configuration. Needs compressed air supply and appropriate fan.



### GC

Stationary ion-exchange filter for hazardous gas components in welding fumes. Installed as final filtration stage after fine filter in central systems. Modular structure.



### SFL

Stationary self-cleaning filter with flat cartridges. For «heavy» processes with high dust concentration incl. graphite, chalk and fiberglass. Requires compressed air supply.



### SFN

Modular automatic self-cleaning filter for dust concentrations up to 50g/m<sup>3</sup>. Filtration surface from 3-60 m<sup>2</sup>. For indoor or outdoor installation. Stand-alone or bunker types are available.



### PU

Stationary dust collector for grinding and sharpening machines. Cyclone plus effective filter system ensures high filtration efficiency. Equipped with manual filter cleaning.



# ESP-2000 Electrostatic Filter



## Description

Electrostatic filters of ESP-2000 series are designed for filtration and cleaning of aerosols of dry and solid substances, welding fumes of low concentration and fine non-metallic dusts with particle sizes down to 0,05 microns. ESP 2000 filters are equipped with alarm system that controls the condition of filter elements. ESP-2000 units are supposed to be used with one or two standard extraction arms, which are ordered separately. In addition to long-life electrostatic filtration system, ESP-2000 can be equipped with additional carbon filter cartridge to absorb gaseous substances and odors. ESP 2000 units are suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Processes and applications

- Welding processes
- Dust extraction
- Soldering



## Restrictions

- Not suitable for extraction of any type of metallic dust
- Not suitable for continuous operation and for high-intensity applications
- Not suitable for welding fume extraction of aluminum or other non-ferrous metals

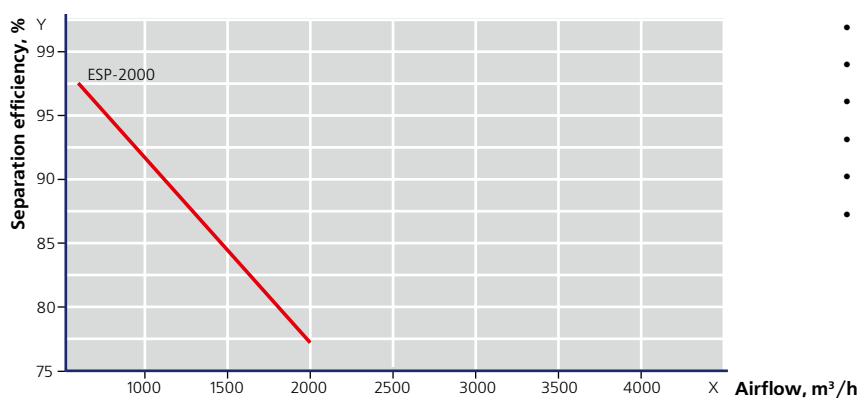
## Features

- Built-in alarm system
- Low lifetime costs
- Wall-hanging, less space needed
- Washable filtration cells
- Additional carbon filter (option)
- Compatible with all standard extraction arms

## Article numbers / Technical characteristics

Article №	Model	Compatible fan model*	Intake chamber	Airflow,m³/h	Filtration surface, m²	Separation efficiency, %	Weight, kg
27004	ESP-2000-1C-1.3	VMA/VMK -1800	splS-2000 (2x160 mm side connections)	800-1200	9,6	>92	69
27006	ESP-2000-1C-1.8	VMA/VMK -2100					
27008	ESP-2000-1C-2.6	VMA/VMK -3000					
27014	ESP-2000-2C-1.3	VMA/VMK -1800	splS-2200 (160 mm bottom connection)				
27016	ESP-2000-2C-1.8	VMA/VMK -2100					
27018	ESP-2000-2C-2.6	VMA/VMK -3000					
27030	ESP-2000-9C-1.3	VMA/VMK -1800	sSTOS-2000 (small, 160 mm bottom connection)				
27032	ESP-2000-9C-1.8	VMA/VMK -2100					
27034	ESP-2000-9C-2.6	VMA/VMK -3000					

## Filtration efficiency diagram



## Delivery set / Standard kit info

- Inlet chamber
- Ionization cell
- Pre-filter
- Mounting flange for VMA fan
- Precipitation cell
- Control panel

## Spare filter elements and accessories

	Article №	Model	Description
	<b>6388</b>	sCF-001	Carbon filter
	<b>6386</b>	sFF-2000	Pre-filter, aluminum, washable
	<b>6046</b>	sIO-2000	Ionization cell, aluminum, washable, 6 tungsten threads
	<b>6045</b>	sEC-2000	Precipitation cell, aluminum, washable, 49 precipitation plates
	<b>5163</b>	spIS-2000	Intake chamber with two side 160mm connections
	<b>5164</b>	spIS-2200	Intake chamber with one 160mm bottom connection
	<b>5177</b>	sSTOS-2000	Small intake chamber with one 160 mm bottom connection
	<b>5320</b>	sPF-2000-3000	Floor stand
	<b>16435</b>	Detergent	Concentrate of liquid detergent for cells washing
	<b>6350</b>	sVPSP-M	High voltage unit for electrostatic filters with alarm circuit card



# ESP-3000 Electrostatic Filter

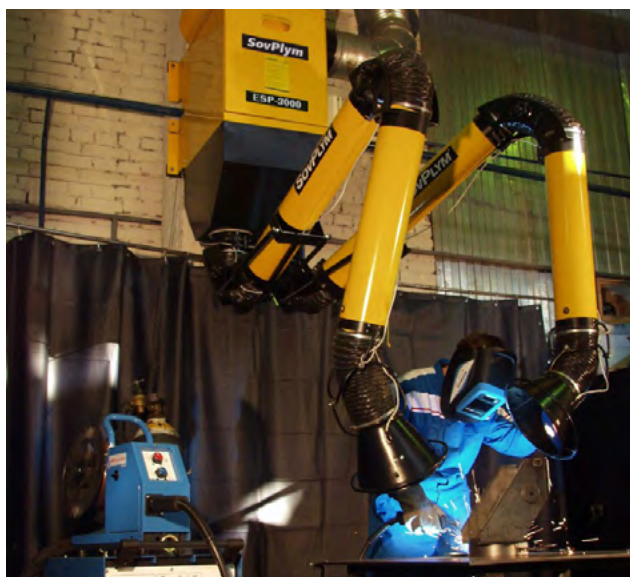


## Description

Electrostatic filters of ESP-3000 series are designed for filtration and cleaning of aerosols of dry and solid substances, welding fumes of low concentration and fine non-metallic dusts with particle sizes down to 0,05 microns. ESP 3000 filters are equipped with alarm system that controls the condition of filter elements. ESP-3000 units are supposed to be used with one or two standard extraction arms, which are ordered separately. In addition to long-life electrostatic filtration system, ESP-3000 can be equipped with additional carbon filter cartridge to absorb gaseous substances and odors. ESP 3000 units are suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Processes and applications

- Welding processes
- Dust extraction
- Soldering



## Restrictions

- Not suitable for extraction of any type of metallic dust
- Not suitable for continuous operation and for high-intensity applications
- Not suitable for welding fume extraction of aluminum or other non-ferrous metals

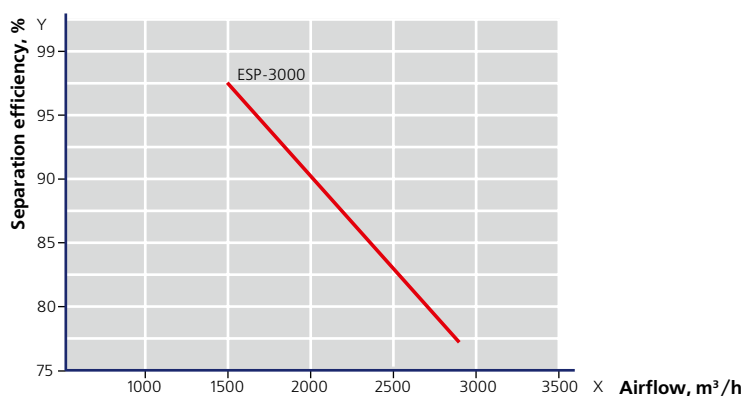
## Features

- Built-in alarm system
- Low lifetime costs
- Wall-hanging, less space needed
- Washable filtration cells
- Additional carbon filter (option)
- Compatible with all standard extraction arms

## Article numbers / Technical characteristics

Article №	Model	Compatible fan model*	Intake chamber	Airflow,m³/h	Filtration surface, m²	Separation efficiency, %	Weight, kg
27042	ESP-3000-3C-2.6	VMA/VMK-3000	spIS-3000 (2x250 mm side connections)	1600-2400	16,4	>92	~90
27044	ESP-3000-3C-4.6	VMA/VMK-4700					
27046	ESP-3000-3C-8.5	VMA/VMK-6000					
27048	ESP-3000-4C-2.6	VMA/VMK-3000	spIS-3200 (2x160 mm bottom connections)				
27050	ESP-3000-4C-4.6	VMA/VMK-4700					
27052	ESP-3000-4C-8.5	VMA/VMK-6000					
27060	ESP-3000-10C-2.6	VMA/VMK-3000	sSTOS-3000 (small, 250 mm bottom connection)				
27062	ESP-3000-10C-4.6	VMA/VMK-4700					
27064	ESP-3000-10C-8.5	VMA/VMK-6000					

## Filtration efficiency diagram



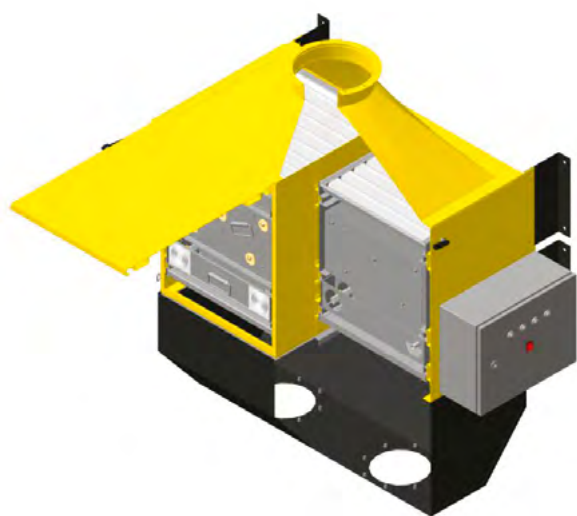
## Delivery set / Standard kit info

- Inlet chamber
- Ionization cell
- Pre-filter
- Mounting flange for VMA fan
- Precipitation cell
- Control panel

## Spare filter elements and accessories

	Article №	Model	Description
	<b>6389</b>	sCF-002	Carbon filter
	<b>6387</b>	sFF-3000	Pre-filter, aluminum, washable
	<b>6049</b>	sIO-3000	Ionization cell, aluminum, washable, 10 tungsten threads
	<b>6048</b>	sEC-3000	Precipitation cell, aluminum, washable, 83 precipitation plates
	<b>5165</b>	spIS-3000	Intake chamber with two side 250mm connections
	<b>5164</b>	spIS-2200	Intake chamber with two 160mm bottom connections
	<b>5178</b>	sSTOS-3000	Small intake chamber with one 250mm bottom connection
	<b>5320</b>	sPF-2000-3000	Floor stand
	<b>16435</b>	Detergent	Concentrate of liquid detergent for cells washing
	<b>6350</b>	sVPSP-M	High voltage unit for electrostatic filters with alarm circuit card

# ESP-5000 Electrostatic Filter



## Description

Electrostatic filters of ESP-5000 series are designed for filtration and cleaning of aerosols of dry and solid substances, welding fumes of low concentration and fine non-metallic dusts with particle sizes down to 0,05 microns. ESP 5000 filters are equipped with alarm system that controls the condition of filter elements. In addition to long-life electrostatic filtration system, ESP-3000 can be equipped with additional carbon filter module to absorb gaseous substances and odors or ion-exchange filter module that allows to capture certain types of gases. ESP-5000 units are supposed to be used with two standard 200 mm extraction arms, which are ordered separately. ESP 5000 units are suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Processes and applications

- Welding processes
- Dust extraction
- Soldering

## Restrictions

- Not suitable for extraction of any type of metallic dust
- Not suitable for continuous operation and for high-intensity applications
- Not suitable for welding fume extraction of aluminum or other non-ferrous metals

## Features and advantages

- Built-in alarm system
- Low lifetime costs
- Wall-hanging, less space needed
- Washable filtration cells
- Additional carbon filter (option)
- Compatible with all standard extraction arms

## Article numbers / Technical characteristics

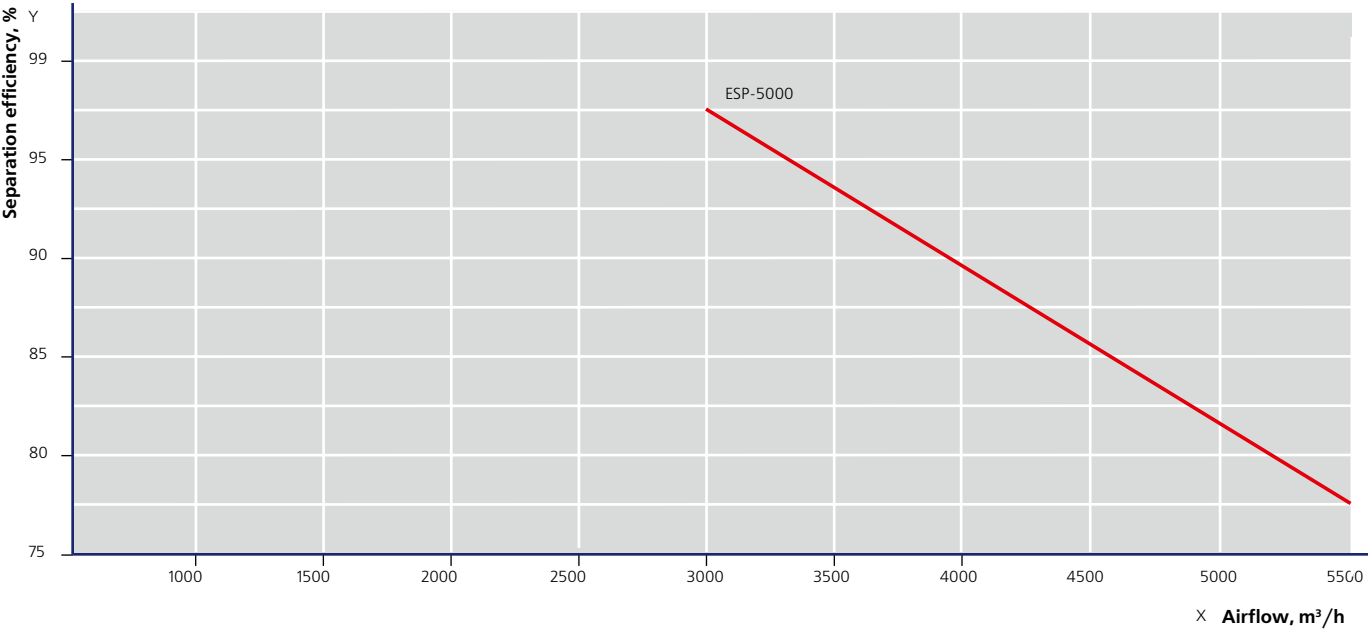
Article №	Model	Compatible fan model*	Intake chamber	Airflow, m³/h	Filtration surface, m²	Separation efficiency, %	Weight, kg
27083	ESP-5000-11c-4.6	VMA/VMK-4700	spIS-5000 (2x250 mm side connections)	3000-4000	32,8	>92	~200
27084	ESP-5000-11c-8.5	VMA/VMK-6000		4000-4800			
27085	ESP-5000-12c-4.6	VMA/VMK-4700	spIS-5200 (2x160 mm bottom connections)	3000-4000			
27086	ESP-5000-12c-8.5	VMA/VMK-6000		4000-4800			
27087	ESP-5000-13c-4.6	VMA/VMK-4700	sSTOS-5000 (small, 250 mm bottom connection)	3000-4000			
27088	ESP-5000-13c-8.5	VMA/VMK-6000		4000-4800			



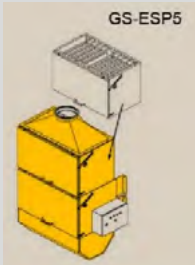
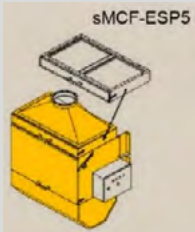
### Delivery set / Standard kit info

- Inlet chamber
- Ionization cell (2 pcs)
- Pre-filter (2 pcs)
- Blowout output filter (2 pcs)
- Mounting flange for VMA fan
- Precipitation cell (2 pcs)
- Control panel (including fan starter and thermal relay)

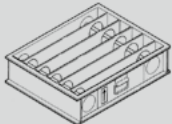
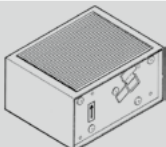
### Filtration efficiency diagram



### Additional filtration modules

	Article №	Model	Description	Pressure drop, Pa
	6298	GS-ESP5	Set of ion exchange filters for ESP-5000. Designed for filtration of gas components contained in the welding fumes. Consists of a metal housing with a door, with two removable sIEC-3 cartridges inside. Module is delivered with cartridges. The module is mounted on top of the main body of ESP-5000 filter.	100
	6299	sMCF-ESP5	Carbon filter for ESP-5000. Mostly efficient for capturing of odours (VOC) gases and CO. Carbon filter module contains two standard replaceable carbon filters sCF-002. The delivery package of sCF-ESP5 includes two carbon filters sCF-002.	400

## Spare filter elements and accessories

	Article №	Model	Description
	<b>6389</b>	sCF-002	Carbon filter
	<b>6387</b>	sFF-3000	Pre-filter, aluminum, washable (2pcs required)
	<b>6049</b>	sIO-3000	Ionization cell, aluminum, washable, 10 tungsten threads (2pcs required)
	<b>6048</b>	sEC-3000	Precipitation cell, aluminum, washable, 83 precipitation plates (2pcs required)
	<b>10866</b>	sIEC-3-ESP5	Ion exchange filter cartridge (2pcs required)
	<b>6385</b>	sPF-5000	Floor stand
	<b>16435</b>	Detergent	Concentrate of liquid detergent for cells washing
	<b>6350</b>	sVPSP-M	High voltage unit for electrostatic filters with alarm circuit card
	<b>10824</b>	sBF-ESP5	Blowout output filter, G4 (2 pcs required). Only for new generation of ESP-5000 filters.





# MM Oil mist mechanical filter



## Description

MistMagician (MM) is designed for stationary installation, direct on a machine tool with no need for ducting or additional use of floor space. The filter will effectively collect coolant smoke or mist from the machine process, and if necessary, return the recovered coolant back to the machine. The filter unit is provided with a range of options for a quick and easy installation.

## Applications

MM oil filters are suitable for almost all types of CNC machines that use oil based coolants and generate oil mists and fumes during the operation.

## Features and advantages

- Efficient filtration of oil mist and light smoke
- Return the recovered coolant back to the machine
- Indicator showing clogging level
- Easy replacement of filter cartridge
- Compact, lightweight design


## Restrictions

- Not recommended for processes with big amounts of smoke.

## Technical characteristics

Article №	Capacity, m <sup>3</sup> /h	Filtering surface area, m <sup>2</sup>	Pressure drop for cartridge replacement, PA	Filtration class	Inlet diameter, mm	Outlet diameter	Weight (w/out fan), kg
5310	500	10	1000	F9 (DIN EN 779), MERV15 ASHRAE 52.2	160	160	14

## Fans for installation on the filter

	Article №	Model	Description
	5780	VMA-1100 (preferred)	Radial fan; 150 – 800 m <sup>3</sup> /h; 1100 – 400 Pa, 0.37 kW, 380 V, 3-ph, 50 Hz
	5044	VMA-1800	Radial fan; 300–1300 m <sup>3</sup> /h; 1500 – 700 Pa, 0.55 kW, 380 V, 3-ph, 50 Hz
	5049	VMA-2100	Radial fan; 400–1500 m <sup>3</sup> /h; 1550 – 650 Pa, 0.75 kW, 380 V, 3-ph, 50 Hz
	6794	MM-F-Set	Parts for installation of the fan on the filter

## 3-stage cleaning principle:







**Step 3.** The smallest particles (less than 1 micron) of the emulsion are stopped and separated by the fine filter. Clean air leaves the filter.

**Step 2.** Remaining particles are mainly captured in the pre-filter.

**Step 1.** The oil mist is forced to twist, and heavy particles (up to 1 micron) are removed in a selfcleaning centrifuge.

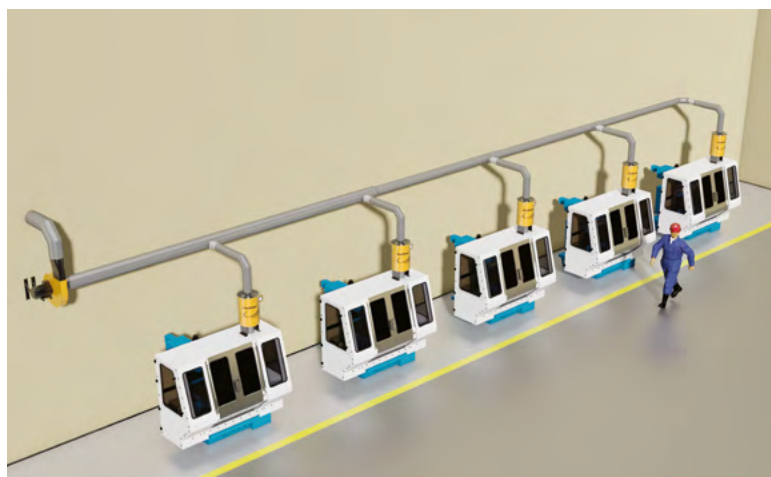
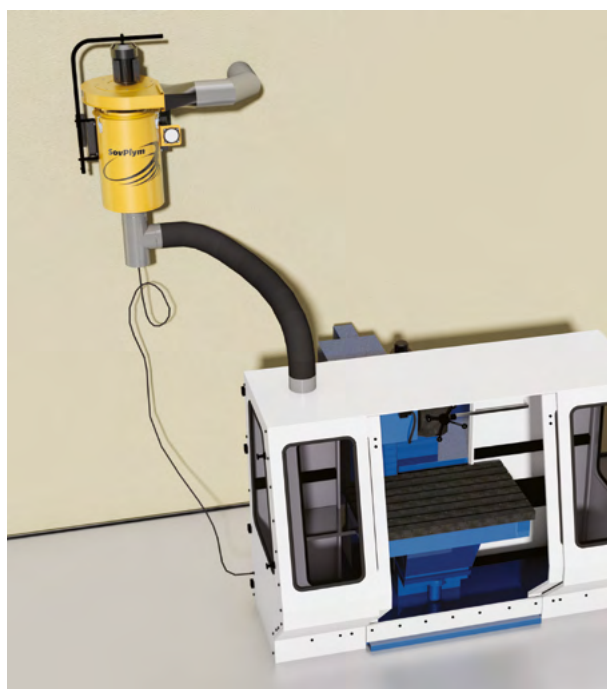


## Accessories and spare filter media

	<b>6793</b>	<b>MM-HOLD/W</b>	Wall mounting bracket
	<b>6792</b>	<b>MM-HOLD/W</b>	Support brackets
	<b>6795</b>	<b>MM-INL</b>	Inlet Inlet for connection of MM filter with machine chamber or extraction arm (in case of mounting next to machine tool). Sizes 2 x 160mm
	<b>6791</b>	<b>MM-AD</b>	Mounting adapter for installation of MM filter on sPA support column
	<b>6796</b>	<b>BAG-CART</b>	Replaceable filter cartridge with bag pre-filter Filtering surface area – 10 m <sup>2</sup> . Replaced at 1000 Pa pressure drop
	<b>6797</b>	<b>MM-BAG</b>	Bag pre-filter for replaceable filter cartridge CART
	<b>6059</b>	<b>sPA-110</b>	Support column for mounting on extraction arm on MM filter, L=110 cm
	<b>6060</b>	<b>sPA-220</b>	Support column for mounting on extraction arm on MM filter, L=220 cm

## Recommended installations

- Direct mounting on metal processing CNC machine tools with closed chamber
- Installation on a separate stand near closed, semi-closed or open type machines
- Installation on a wall next to the closed, semi-closed or open type machines



# ESPO Oil smoke Electrostatic Precipitator



ESPO-3000

ESPO-5000

## Description

ESPO are high performance filters for capturing of oil smoke with particles down to 0.05 microns. It works according to the principle of electrostatic precipitation. A unique solution for cleaning air containing extremely small oil particles. The heavy duty electrostatic cells have an extremely long life and require an absolute minimum of maintenance as they don't need any normal filter replacement. Espo is designed for 1-2 work shifts.

## Processes and applications

- Heat treatment
- Cold-drawing
- Forging operations and cold pressing

## Features and advantages

- Perfect for oil smoke
- Maximum initial concentration is 30-40 mg/m<sup>3</sup>
- Suitable for processes with oil smoke from strong heating oil
- Suitable for thick oil (high kinematic viscosity)
- Does not require replacement of filter elements
- Built-in alarm for filter clogging
- Comes with a special agent for washing the electrostatic cassettes

## Restrictions

- Not suitable for processes with metal grinding or any use of oils containing metal particles
- Requires emulsions with minimum 5% oil content
- Not suitable for oils with a flash point below 150 °C
- Operations including water steam

## Technical characteristics

Article №	Model	Recommended fan	Recommended airflow, m <sup>3</sup> /h, max	Recommended number of extraction units	Delivered with	Filter surface, m <sup>2</sup>	Filter efficiency	Weight, kg
27082	ESPO-2000	VMA-3000	1000	1	sIMP-2000 – 1 pc sFFO-2000 – 1 pc sIOO-2000 – 1 pc sEC-2000 – 1 pc	9,6	92%	80
27054	ESPO-3000	VMA-4700	1500	1-2	sIMP-3000 – 1 pc sFFO-3000 – 1 pc sIOO-3000 – 1 pc sEC-3000 – 1 pc	16,4	92%	102
27083	ESPO-5000 (special order)	VMA-6000	3000	2-3	sIMP-3000 – 2 pc sFFO-3000 – 2 pc sIOO-3000 – 2 pc sEC-3000 – 2 pc	32,8	92%	200



# Design and operating principles

## 3+2 stage cleaning principle

The initial **3 stage mechanical** pre filtration captures 80% of all oil particles, optimizing the efficiency of the following **2 stage electrostatic** filtration.

This also minimizes the need of cleaning the electrostatic cells and eliminates the need for replacement.

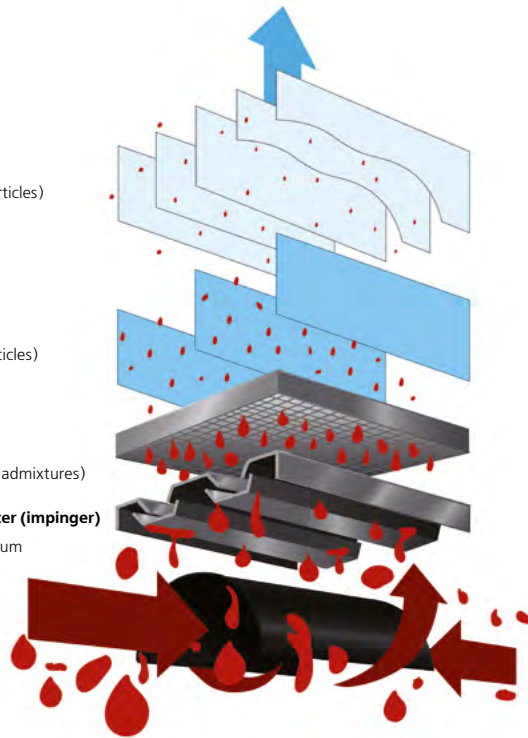
**5. Precipitating cell**  
(captures smallest particles)

**4. Ionization cell**  
(charges smallest particles)

**3. Net pre-filter**  
(captures mechanical admixtures)

**2. Labyrinth type filter (impinger)**  
(stops large and medium parts of aerosol)

**1. Liquid fraction separator**  
(stops large drops of oil)

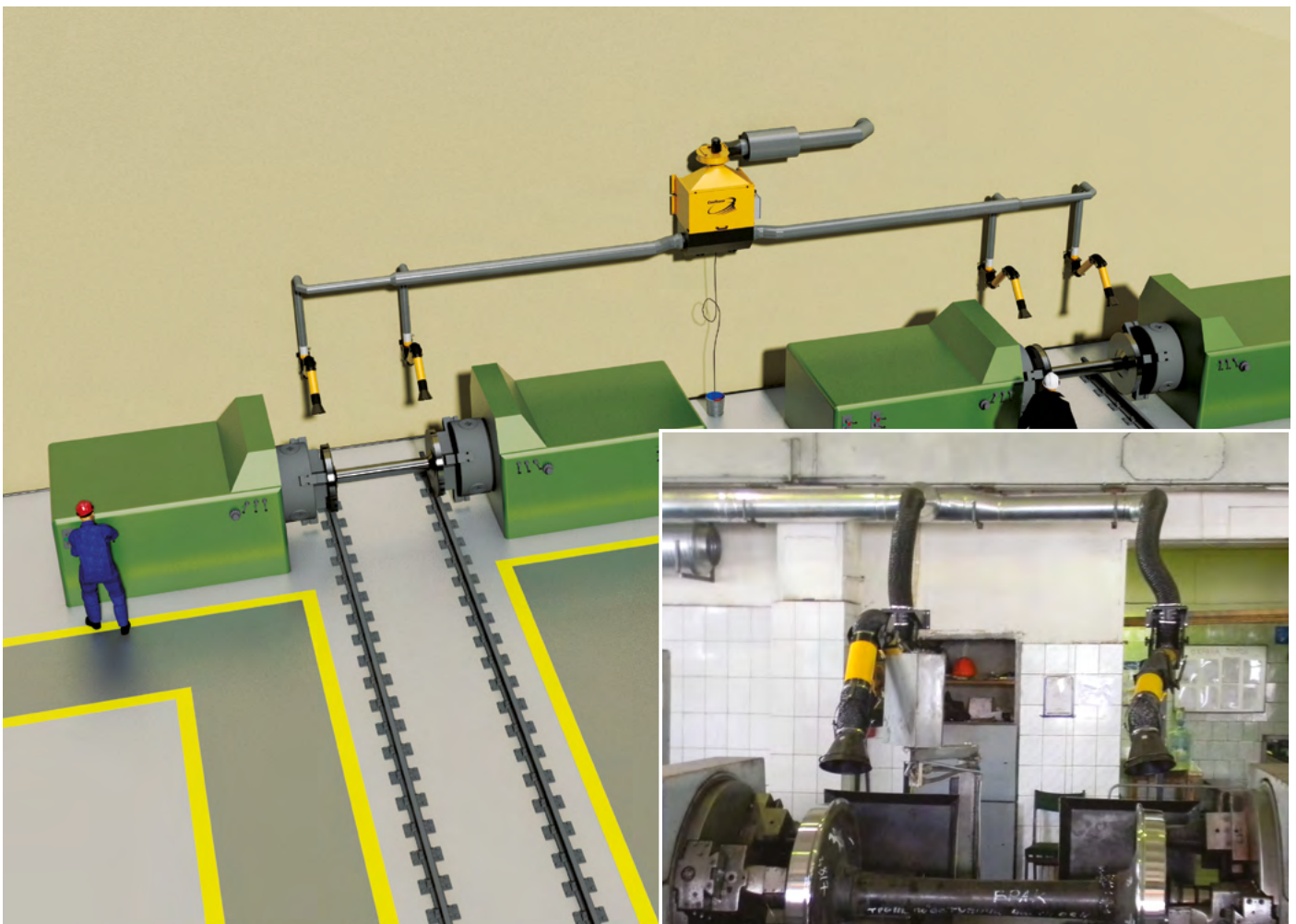


## Electrostatic filtration, stage 4-5

In stage 4, the electrostatic filter's ionizing cell, all remaining particles are charged with 12 000 V, hereafter, stage 5, they efficiently are attracted to the negatively charged collector plates of the collection cell

## Mechanical filtration, stage 1-3

80% of the oil particles (i.e. all in liquid form), are arrested in the mechanical filters



# MT-31/MT-32 Oil mist/smoke Mechanical Filters



## Description

The MistTerminator (MT) is a modular filtration system that captures oil smoke/mist. For handling oil mist, you shall choose the MT-31. If you need to handle both oils mist and oil smoke you require MT-32 that contains an additional HEPA filter. All MT filter units and filter banks are modular and can be tailored to your needs (See page 94-95).

## Processes and applications

- Cutting, boring, drilling, honing using various metalworking equipment and CNC machine tools
- Cold pressing and stamping operations
- Hardening and wet grinding of metal

## Restrictions

Do not use the MT-31/MT-32 and MT-41/MT-42 for the following applications or in the following circumstances:

- Aluminium laser cutting
- Arc-air gouging
- Paint mist
- Extraction of hot gases (more than 45°C/113°F continuously)

## Features and advantages

- Intended for 1 - 2 work shift, light mode (processing parts at low and medium speed)
- Suitable for processes involving contamination of coolant in the form of a thick sludge of metallic particles and burnt oil
- Handles combined wet and dry metal processing
- Not suitable for oils with a flash point below 150 °C (300°F)
- Maximum initial oil concentration is 30 – 40 mg/m<sup>3</sup>
- Filters have pressure indicator showing clogging level
- Prepared for direct mounting of the fan on the filter
- New mechanism for quick filter replacement during scheduled maintenance
- Two input sockets for easy alternative duct installation

## Technical characteristics see page 100

### Delivery set of all single filter units MT-31, MT-32, MT-41 and MT-42:

- Filter body, preassembled with all filter elements
- and pre-filters
- 250 mm inlet nipple (in the inlet module)
- 250 mm cover (in the inlet module)
- 250 mm outlet for direct installation of the fan
- (on top cover of the filter)

### To be ordered separately:

- Extraction fan
- Pressure adapter for the fan connection to round section duct line
- Silencer
- Fan starter
- Connection flange (see next page)
- Outlet nipple for connection to the extraction fan

# Design and operating principles

## 5 stage (MT-32)

**Stage 5 (MT-32)**  
**HEPA-filter (MT-32)**  
(ultra fine cleaning, class of filtration MERV 16 ASHRAE 52.2 or H13 DIN EN1822)

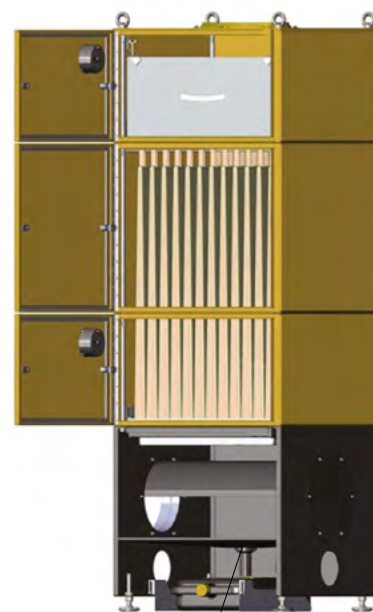
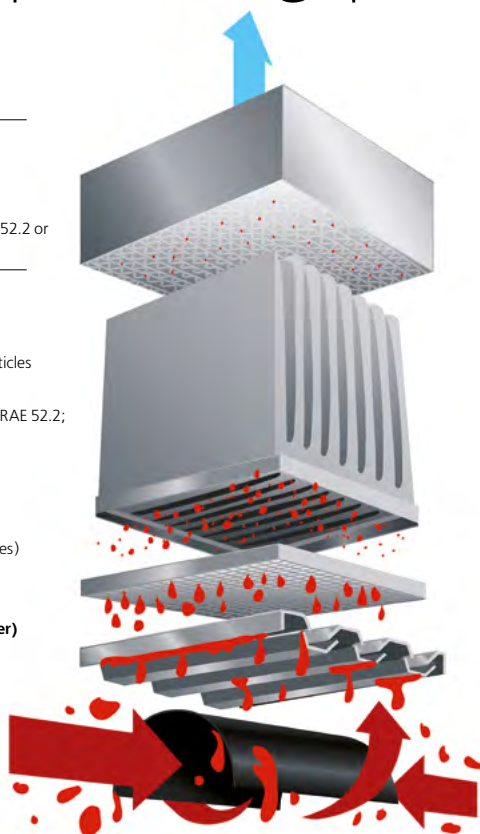
## 4 stage (MT-31)

**Stage 4 (MT-31)**  
**Bag filter**  
(main filter, captures small particles of oil; class of filtration F9 DIN EN 779 or MERV 15 ASHRAE 52.2; 11,2 m<sup>2</sup>, fiberglass)

**Stage 3**  
**Net pre-filter**  
(captures mechanical admixtures)

**Stage 2**  
**Labyrinth type filter (impinger)**  
(stops large and medium size aerosol particles)

**Stage 1**  
**Inlet with a screen for liquid fraction and drops**



### Return drain pipe

The oil is drained back either to a collector tank or back to the machine.

## Various connections

MT-31, MT-32 and MT-41, MT-42

### Connection of fans to single filter units

The fan is installed on top of the filter and attached to adapter (adapter is included in the standard delivery set).



### Connection of single filter unit to external fan

The filter is connected to 250mm duct line with the connection flange (ordered separately).



### Connection of the ducting to the intake module of single filter units

The inlet nipple is placed on the right side of the inlet module.

Alternatively the ducting might be connected from the left side of the filter.

All single filter units come with a 250 mm inlet.





# MT-41/MT-42

# Oil mist/smoke Mechanical Filters



## Description

The MistTerminator (MT) is a modular filtration system that captures oil smoke/mist. For handling oil mist, you shall choose the MT-41. If you need to handle both oils mist and oil smoke you require MT-42 that contains an additional HEPA filter. All MT filter units and filter banks are modular and can be tailored to your needs (See page 92-93).

## Processes and applications

- Cutting, boring, drilling, honing using various metalworking equipment and CNC machine tools
- Cold pressing and stamping operations
- Hardening and wet grinding of metal

## Technical characteristics

Description	MT-31 art. 5290	MT-32 art. 5293	MT-41 art. 5296	MT-42 art. 5299
Airflow, m³/hour, max	3,000	3,000	2,000	2,000
Pressure loss (for calculation purposes), Pa	700	1,200	1,300	1,500
Weight, kg	98	134	104	138
Filtration class: DIN EN 779(F9)/ DIN EN 1822 (H13); ASHRAE 52.2(MERV15/MERV16)	F9/MERV15	H13/MERV16	F9/MERV15	H13/MERV16
Negative pressure (max.), Pa	4,000			
Oil receiver capacity (makes part of the delivery package), l	8			
Inlet diameter, mm	2x250 (1 inlet connection piece and 1 plug in the package)			
Diameter of connecting flange sFF-DUCT/250 airduct (to be ordered additionally), mm	250			
sFF-FAN-B connecting flange (for VMA-3000-4700 fans)	250			
Maximum pressure drop on the filtering element, at which it should be replaced (control over the pressure drop is realized by readings of the differential manometer in built into the door of every filtration stage), Pa				
BFMT-31 Bag filter (for MT-31, MT-32)	500			
OC-1 Filter cartridge, 1st stage. Self-draining (for MT-41, MT-42)	500			
OC-2 Filter cartridge, 2st stage. Self-draining (for MT-41, MT-42)	800			
HFMT-3. HEPA filter (for MT-32, MT-42)	800			
Capacity and amount of OilContainer oil receivers (makes part of the delivery package)	8 l /1 piece			

**Delivery set** see page 98

# Design and operating principles

## 6 stage (MT-42)

**Stage 6 (MT-42)**  
**HEPA-filter (MT-42)**  
 (ultra fine cleaning, class  
 of filtration MERV 16 ASHRAE 52.2 or  
 H13 DIN EN 1822)

## 5 stage (MT-41)

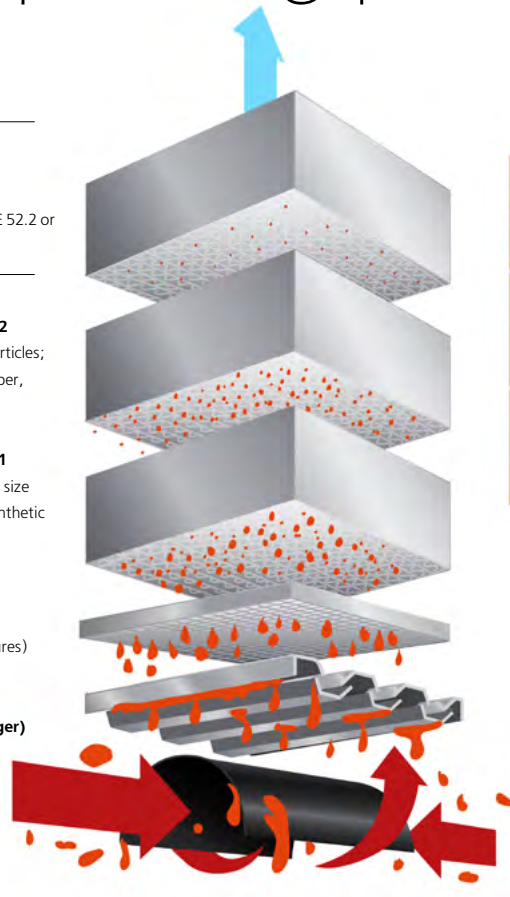
**Stage 5 (MT-41)**  
**Self-draining cartridge OC-2**  
 (main filter, captures small particles;  
 24m<sup>2</sup>, polyolefine synthetic fiber,  
 ASHRAE 52.2 MERV15)

**Stage 4 (MT-41)**  
**Self-draining cartridge OC-1**  
 (main filter, captures medium size  
 particles; 16m<sup>2</sup>, polyolefine synthetic  
 fiber, ASHRAE 52.2 MERV8)

**Stage 3**  
**Net pre-filter**  
 (captures mechanical admixtures)

**Stage 2**  
**Labyrinth type filter (impinger)**  
 (stops large and medium  
 size aerosol particles)

**Stage 1**  
**Inlet with a screen for  
 liquid fraction and drops**



### Return drain pipe

The oil is drained back either to a collector tank or back to the machine.



# MT-3X/X Oil mist/smoke Modular Filters



**MT-32/5**  
Oil smoke  
Oil mist



## Features and advantages

The MT filter is a modular filter system which can be tailored to the requirements of your application today and expanded tomorrow when your business grows.

The efficient and effective performance of each module also allows compact solutions. The range of technical features and the latest filter technology results

in a filter system that is cost-effective to operate and maintain.



Each filter has indicator showing clogging level.

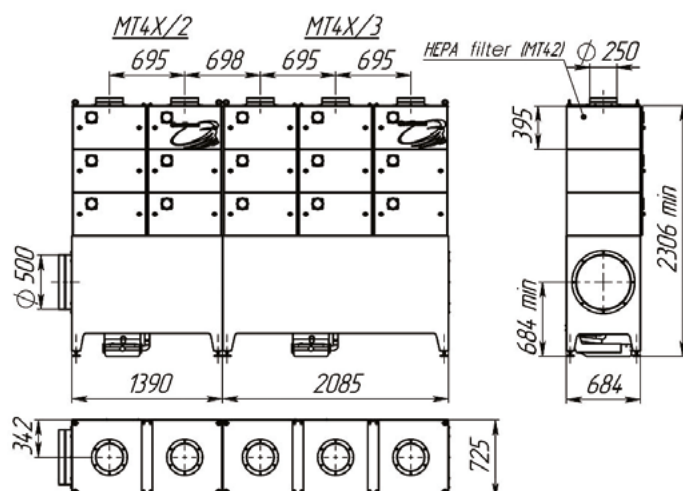
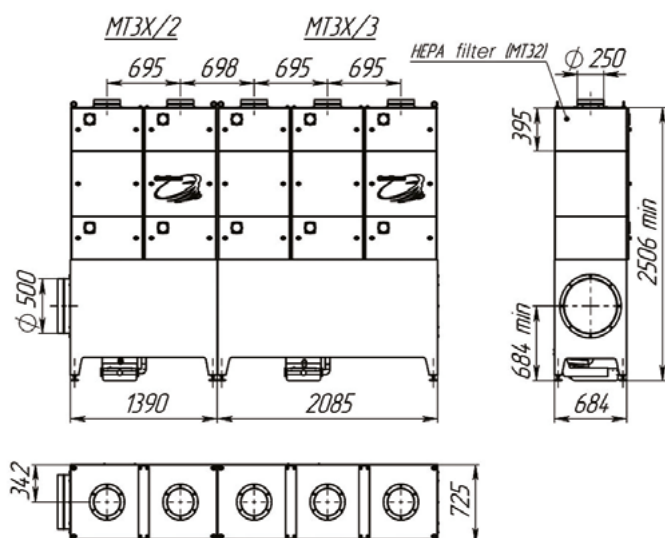
## Connections

### Connection of modular filters MT to the extraction fan

There are two types of outlets for connection of MT filters to the ventilation system:

- with side connection
- with top connection.

	Article №	Outlet for connection to duct line: <b>SIDE connection</b>	
	6780	MT-OUTLET/2S	for MT-XX/2; Ø400 mm
	6781	MT-OUTLET/3S	for MT-XX/3; Ø400 mm
	6782	MT-OUTLET/4S	for MT-XX/4; Ø500 mm
	6783	MT-OUTLET/5S	for MT-XX/5; Ø500 mm
	Article №	Outlet for connection to duct line: <b>TOP connection</b>	
	6784	MT-OUTLET/2T	for MT-XX/2; Ø400 mm
	6785	MT-OUTLET/3T	for MT-XX/3; Ø400 mm
	6786	MT-OUTLET/4T	for MT-XX/4; Ø500 mm
	6787	MT-OUTLET/5T	for MT-XX/5; Ø500 mm



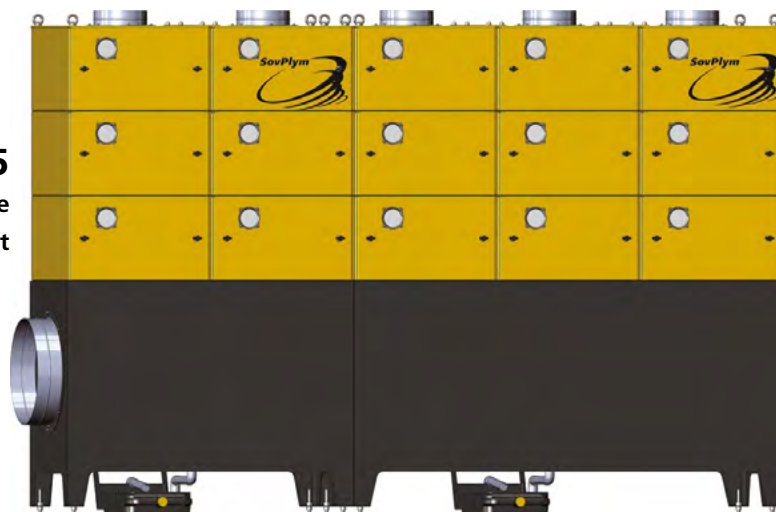


# MT-4X/X Oil mist/smoke Modular Filters

**MT-41/2 Oil mist**







**MT-42/5**  
Oil smoke  
Oil mist



## Accessories and replaceable filter media

The filter media should be replaced if the pressure drop exceed the value below.

	Article №	Type of filtering cartridge	Filter cartridge model	Pressure drop, Pa
	37254	Bag filter BFMТ-31	BFMT-31	500
	98801	Self-draining cartridge OC-1	OC-1	500
	98802	Self-draining cartridge OC-2	OC-2	800
	98803	HEPA filter HFMT-3	HFMT-3	800

## Capacity

MT-31/2, MT-32/2	6 000 m <sup>3</sup> /h
MT-31/3, MT-32/3	9 000 m <sup>3</sup> /h
MT-31/4, MT-32/4	12 000 m <sup>3</sup> /h
MT-31/5, MT-32/5	15 000 m <sup>3</sup> /h

MT-41/2, MT-32/2	4000 m <sup>3</sup> / h
MT-41/3, MT-32/3	6000 m <sup>3</sup> / h
MT-41/4, MT-32/4	8000 m <sup>3</sup> / h
MT-41/5, MT-32/5	10,000 m <sup>3</sup> / h



# DCA-W Stationary filter unit



## Description

Stationary wall mounted filter unit DCA-W is designed for extraction and cleaning of welding and soldering fumes as well as for fine dust generated by grinding processes. DCA-W is intended for indoor operation as a part of air extraction and cleaning system. In addition to long-life fine filtration cassette, DCA-W can be equipped with additional carbon filter cartridge to absorb gaseous substances and odors.

## Processes and applications

- Welding processes
- Dust extraction
- Soldering



## Features

- Simple and robust design
- Big dust capacity of the filter
- High filtration efficiency
- Additional carbon filter (option)

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite

## Article numbers / Technical characteristics

Article №	Model	Compatible fan model*	Max airflow, m <sup>3</sup> /h	Filtration surface, m <sup>2</sup>	Intake chamber	Cleaning efficiency, %	Weight, kg
5482	DCA-W-2000-1	VMA/VMK-2100/3000	1100	15	spIS-2000 (2x160 mm side connections)	>99	64
5483	DCA-W-2000-2				spIS-2200 (160 mm bottom connection)		
5487	DCA-W-2000-9				sSTOS-2000 (small, 160 mm bottom connection)		
5485	DCA-W-3000-3	VMA/VMK-3000/4700	1500	25	spIS-3000 (2x160 mm side connections)	>99	89
5486	DCA-W-3000-4				spIS-3200 (160 mm bottom connection)		
5488	DCA-W-3000-10				sSTOS-3000 (small, 160 mm bottom connection)		

\*Fan is not included in the delivery package and needs to be ordered separately.



## Spare filter elements and accessories

	Article №	Model	Description
	<b>6388</b>	sCF-001	Carbon filter for DCA-W-2000 filter unit
	<b>6389</b>	sCF-002	Carbon filter for DCA-W-3000 filter unit
	<b>6386</b>	sFF-2000	Pre-filter for DCA-W-2000, aluminum, washable
	<b>6387</b>	sFF-3000	Pre-filter for DCA-W-3000, aluminum, washable
	<b>5163</b>	spIS-2000	Intake chamber with two side 160mm connections for DCA-W-2000
	<b>5165</b>	spIS-3000	Intake chamber with two side 160mm connections for DCA-W-3000
	<b>5164</b>	spIS-2200	Intake chamber with one 160mm bottom connection for DCA-W-2000
	<b>5166</b>	spIS-3200	Intake chamber with one 160mm bottom connection for DCA-W-3000
	<b>5177</b>	sSTOS-2000	Small intake chamber with one 160mm bottom connection for DCA-W-2000
	<b>5178</b>	sSTOS-3000	Small intake chamber with one 160mm bottom connection for DCA-W-3000



# We bring top performance

Low operating costs  
and a quick return  
on your investment!



# DCSC-S Modular stationary filter unit



## Description

Modular self-cleaning DCSC-S filter unit is specially designed for cleaning of air from aerosols emitted during thermal metal cutting applications and welding, as well as from other types of non-sticky and non-combustible dusts or fume particles. DCSC-S is intended for indoor operation as a part of air extraction and cleaning system. Unit is equipped with highly efficient compressed air pulse filter cleaning system. Connection to external compressed air supply is required. Additional cleaning efficiency is provided by special air splitter inserts installed in each of the filter cartridges of the unit. Modular design of the filter unit allows to easily build the DCSC-S unit of required capacity and size. Standard modules and fittings ensure the simple assembly and installation procedures.

## Industries and applications

- Metal works
- Engineering
- Chemical
- Metallurgy
- Welding processes
- Ore mining

## Features and advantages

- Modular design
- Easy assembly and installation
- Simple change of filter cartridges
- High filtration efficiency
- Effective air cleaning system
- Compatible with different types of filter media

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite

## Delivery set / Standard kit info

- Filter cartridges (quantity and type depends on the exact model of filter unit)
- Filter body (consists of sBM-2 and sBM-4 modules)
- Inlet/outlet fittings
- Floor support (legs)
- sMFA hopper
- sDB-60-250 dust collector 60l (quantity depends on the exact model of filter unit)
- sAZD regulation damper (quantity depends of the exact filter unit)
- sVMO oil separator with gauge and pressure reduction box
- sDNMP100 differential gauge with bracket
- sCONT control panel
- sCAF pneumatic kit

## List of DCSC-S models

Model	Airflow, m³/h	Filtration area, m²	No. of cartridges	sINL and sOUTL fittings, mm	Number of prefilters*	Pneumatic connection	Type of filter cartridge
DCSC-s-2-FD	600-2000	24/20	2	315	sBPF – s-1	sCAF-4	Pcart-12 Acart-12 Tcart-12 Tcart-10
DCSC-S-2	600-2000	24/20	2	315	sBPF – 1	sCAF-4	
DCSC-S-4	1200-4000	48/40	4	315	sBPF – 1	sCAF-4	
DCSC-S-6	1800-6000	72/60	6	315	sBPF – 1 sBPF-S – 1	sCAF-6	
DCSC-S-8-V	2400-8000	96/80	8	400	sBPF – 2	sCAF-8V	
DCSC-S-8-H	2400-8000	96/80	8	400	sBPF – 1	sCAF-8H	
DCSC-S-10-V	3000-10000	120/100	10	400	sBPF – 2 sBPF-S – 1	sCAF-10V	
DCSC-S-12	3600-12000	144/120	12	400	sBPF – 1 sBPF-S – 1	sCAF-12	
DCSC-S-12-H	3600-12000	144/120	12	400	sBPF – 3	sCAF-12H	
DCSC-S-12-V	3600-12000	144/120	12	400	sBPF – 3	sCAF-12V	
DCSC-S-16	4800-16000	192/160	16	500	sBPF – 2	sCAF-16	
DCSC-S-16-H	4800-16000	192/160	16	500	sBPF – 4	sCAF-16H	
DCSC-S-16-V	4800-16000	192/160	16	500	sBPF – 4	sCAF-16V	
DCSC-S-18	5400-18000	216/180	18	500	sBPF – 3	sCAF-18	
DCSC-S-20	6000-20000	240/200	20	500	sBPF – 2 sBPF-S – 1	sCAF-20	
DCSC-S-24-H	7200-24000	288/240	24	400	sBPF – 4	sCAF-24H	
DCSC-S-24-V	7200-24000	288/240	24	500	sBPF – 6	sCAF-24V	
DCSC-S-32-H	9600-32000	384/320	32	500	sBPF – 4	sCAF-32H	
DCSC-S-32-V	9600-32000	384/320	32	500	sBPF – 8	sCAF-32V	
DCSC-S-36	10800-36000	432/360	36	500	sBPF – 6	sCAF-36	
DCSC-S-48-H	14400-48000	576/480	48	500	sBPF – 6	sCAF-48H	
DCSC-S-48-V	14400-48000	576/480	48	500	sBPF – 8	sCAF-48V	
DCSC-S-64	19200-64000	768/640	64	500	sBPF – 8	sCAF-64	

\*NOT INCLUDED into standard delivery set

## Spare filter elements

Article №	Cartridge type (index)	Application area	Features
<b>Standard cartridges, 12 m²</b>			
6900	Pcart-12	Dust with particle size over 0.5 µm.	Preliminary coating by sPreco-N is recommended (500 to 1000 g per 1 cartridge). It is essential to control and keep the recommended air flow.
		Welding aerosols	Preliminary coating by sPreco-N is required (500 to 1000 g per 1 cartridge). It is essential to control and keep the recommended air flow.
6901	Acart-12	Dust with particle size over 0.5 µm prone to electrostatic charge accumulation.	Preliminary coating by sPreco-N is recommended (500 to 1000 g per 1 cartridge). It is essential to control and keep the recommended air flow.
6903	Tcart-12	**Plasma, laser and gas cutting aerosols. Welding aerosols. Sublimates, soldering fumes. Various types of dust with majority of fine fraction (Dust with particle size less than 0.5 µm).	Preliminary coating is not necessary. For heavy duty applications. Higher speed of filtration is allowed. Longer cartridge life-time.
<b>Special cartridges, 10 m²</b> For very rough working conditions.			
6908	Tcart-10	Welding aerosols. Sublimates, soldering fumes. Various types of dust with majority of fine fraction (Dust with particle size less than 0.5 µm).	Preliminary coating is not necessary. For very rough working conditions at thermal cutting of metals and similar processes. Higher speed of filtration is allowed. Longer cartridge life-time.

\*\*Recommended air flow per cartridge:

– plasma cutting – 430 m³/h (for T12), 360 m³/h (for T10);

– laser and gas cutting – 580 m³/h (for T12), 480 m³/h (for T10).

Consult with SovPlym JSC upon selection of filters and ventilation units for thermal (plasma, laser or gas) cutting.



## Accessories

	Article №	Model	Description
	<b>10009</b>	sCONT	Control unit up to 32 valves. Programmable timer. Filter cleaning cycle control
	<b>5170</b>	Hopper sMFA	Hopper for dust collection
	<b>5167</b>	Inlet/outlet 315	Inlet/outlet socket, 315 mm, w/out plugs
	<b>5168</b>	Inlet/outlet 400	Inlet/outlet socket, 400 mm, w/out plugs
	<b>5169</b>	Inlet/outlet 500	Inlet/outlet socket, 500mm, w/out plugs
	<b>6957</b>	Inlet/outlet 315-S	Inlet/outlet socket shortened, 315 mm, w/out plugs
	<b>6958</b>	Inlet/outlet 400-S	Inlet/outlet socket shortened, 400 mm, w/out plugs
	<b>6959</b>	Inlet/outlet 500-S	Inlet/outlet socket shortened, 500 mm, w/out plugs
	<b>6154</b>	sZ-315	Plug, 315 mm
	<b>6155</b>	sZ-400	Plug, 400 mm
	<b>6156</b>	sZ-500	Plug, 500 mm
	<b>6352</b>	sBPF	Mesh pre-filter
	<b>6952</b>	sBPF-S	Mesh pre-filter, small
	<b>6160</b>	sDB-40-250	Dust bin, 40l, 250 mm flange
	<b>6169</b>	sDB-60-250	Dust bin, 60l, 250 mm flange

# DCSC-FMP(F) Stationary filter unit



## Description

Self-cleaning DCSC-FMP(F) filter unit with flat filter cartridges is specially designed for cleaning of air from aerosols emitted during thermal metal cutting applications, as well as from other types of non-sticky and non-combustible dusts or fume particles. Filtration system with flat cartridges is capable of handling complex types of dusts such as graphite, chalk, fiberglass and similar. DCSC-FMP(F) is intended for indoor operation as a part of air extraction and cleaning system. Unit is equipped with highly efficient filter jet pulse compressed air filter cleaning system. Connection to external compressed air supply is required. Additional cleaning efficiency is provided by special air splitters inserts installed in each of the filter cartridges of the unit. Design of the DCSC-FMP(F) allows to combine multiple filter units to increase overall capacity.

## Applications

- Welding processes
- Metal thermal cutting
- Blasting and sandblasting
- Metal surface treatment
- Mechanical metal cutting
- Handling of dry bulk materials

## Industries

- Chemical
- Metallurgy
- Metal works
- Production of construction materials
- Ore mining
- Engineering

## Features

- Built-in fan (FMPF model)
- Easy assembly and installation
- Simple change of filter cartridges
- High filtration efficiency
- Effective air cleaning system
- Units can be combined to increase overall capacity

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite
- In case of sparking application, an additional spark protection measures are required



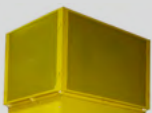



## List of DCSC-FMP models

Article №	Model	Airflow, m³/h	Filtration area, m²	No. of cartridges	Type of filter cartridge	Fan	Fan power, kW
<b>DCSC-FMP (without fan)</b>							
5636	DCSC-FMP-2	1200-2700	32,5	10	PCart-DCSC-FMP	-	-
5666	DCSC-FMPt-2	1200-2700	32,5	10	TCart-DCSC-FMP	-	-
5637	DCSC-FMP-4	2400-5500	65	20	PCart-DCSC-FMP	-	-
5667	DCSC-FMPt-4	2400-5500	65	20	TCart-DCSC-FMP	-	-
5638	DCSC-FMP-6	3500-8200	97,5	30	PCart-DCSC-FMP	-	-
5668	DCSC-FMPt-6	3500-8200	97,5	30	TCart-DCSC-FMP	-	-
<b>DCSC-FMPF (with built-in fan)</b>							
5639	DCSC-FMPF-2-4,7	1200-2700	32,5	10	PCart-DCSC-FMP	VFMP 4,7	2,2
5669	DCSC-FMPFt-2-4,7	1200-2700	32,5	10	TCart-DCSC-FMP	VFMP 4,7	2,2
5641	DCSC-FMPF-4-6	2400-5500	65	20	PCart-DCSC-FMP	VFMP 6	4
5671	DCSC-FMPFt-4-6	2400-5500	65	20	TCart-DCSC-FMP	VFMP 6	4
5640	DCSC-FMPF-4-7,5	2400-5500	65	20	PCart-DCSC-FMP	VFMP 7,5	5
5670	DCSC-FMPFt-4-7,5	2400-5500	65	20	TCart-DCSC-FMP	VFMP 7,5	5
5643	DCSC-FMPF-6-9	3500-8200	97,5	30	PCart-DCSC-FMP	VFMP 9	7,5
5672	DCSC-FMPFt-6-9	3500-8200	97,5	30	TCart-DCSC-FMP	VFMP 9	7,5
5642	DCSC-FMPF-6-11	3500-8200	97,5	30	PCart-DCSC-FMP	VFMP 11	11
5673	DCSC-FMPFt-6-11	3500-8200	97,5	30	TCart-DCSC-FMP	VFMP 11	11





## Accessories

	Article №	Model	Description
	<b>6296</b>	NRG	Noise reduction jacket for DCSC-FMPF
	<b>10089</b>	sDNMP100	Differential gauge
	<b>6058</b>	Bracket	Bracket for differential gauge
	<b>10432</b>	PCart-DCSC-FMP	Flat filter cartridge, polyester
	<b>18448</b>	ACart-DCSC-FMP	Flat filter cartridge, antistatic
	<b>10637</b>	TCart-DCSC-FMP	Flat filter cartridge, PTFE

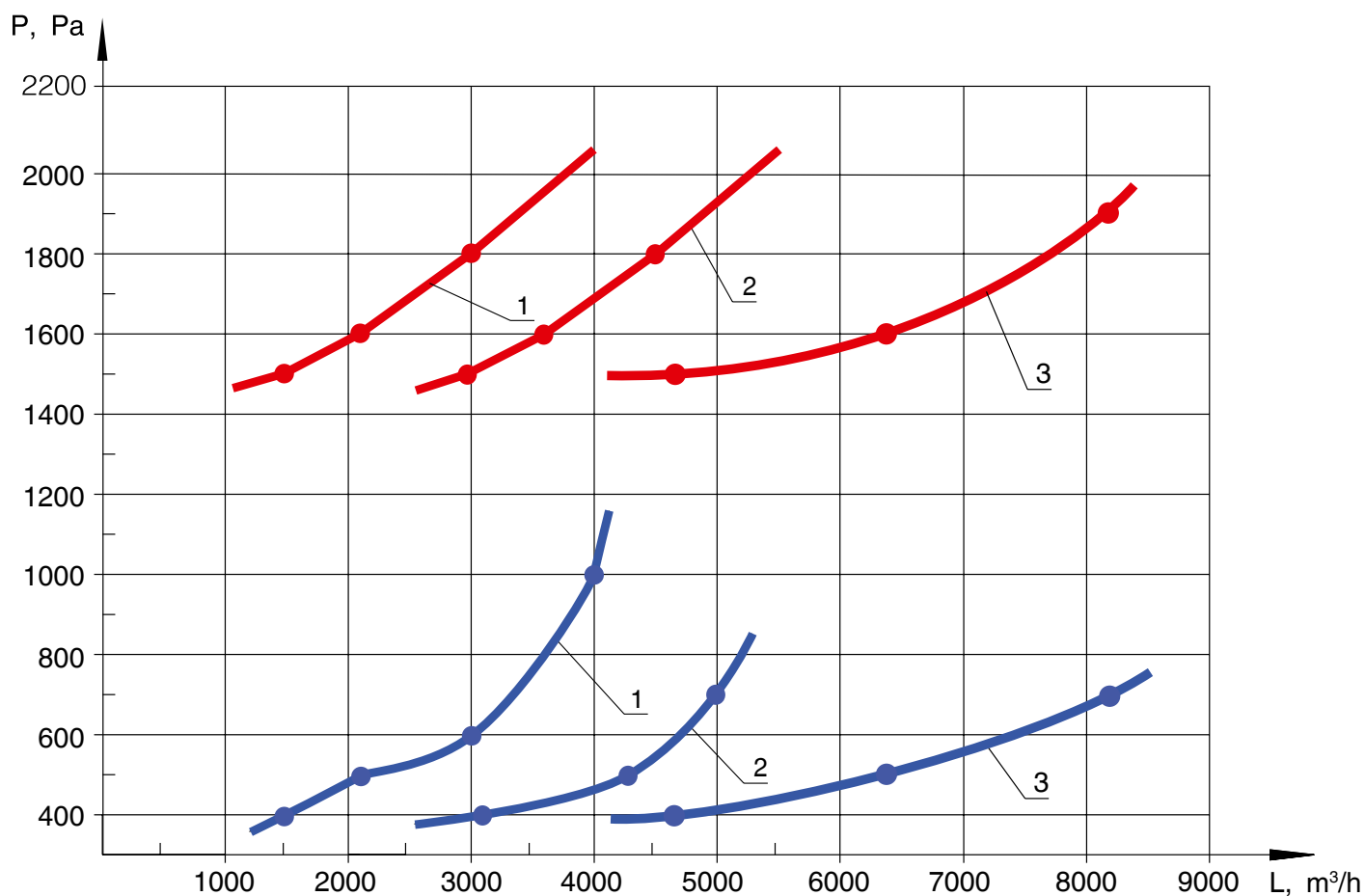
## Aerodynamic characteristics of the FMP and FMPF filters

1 – DCSC-FMP-2, DCSC-FMP-F-2

2 – 2xDCSC-FMP-2, DCSC-FMP-4, DCSC-FMPF-4

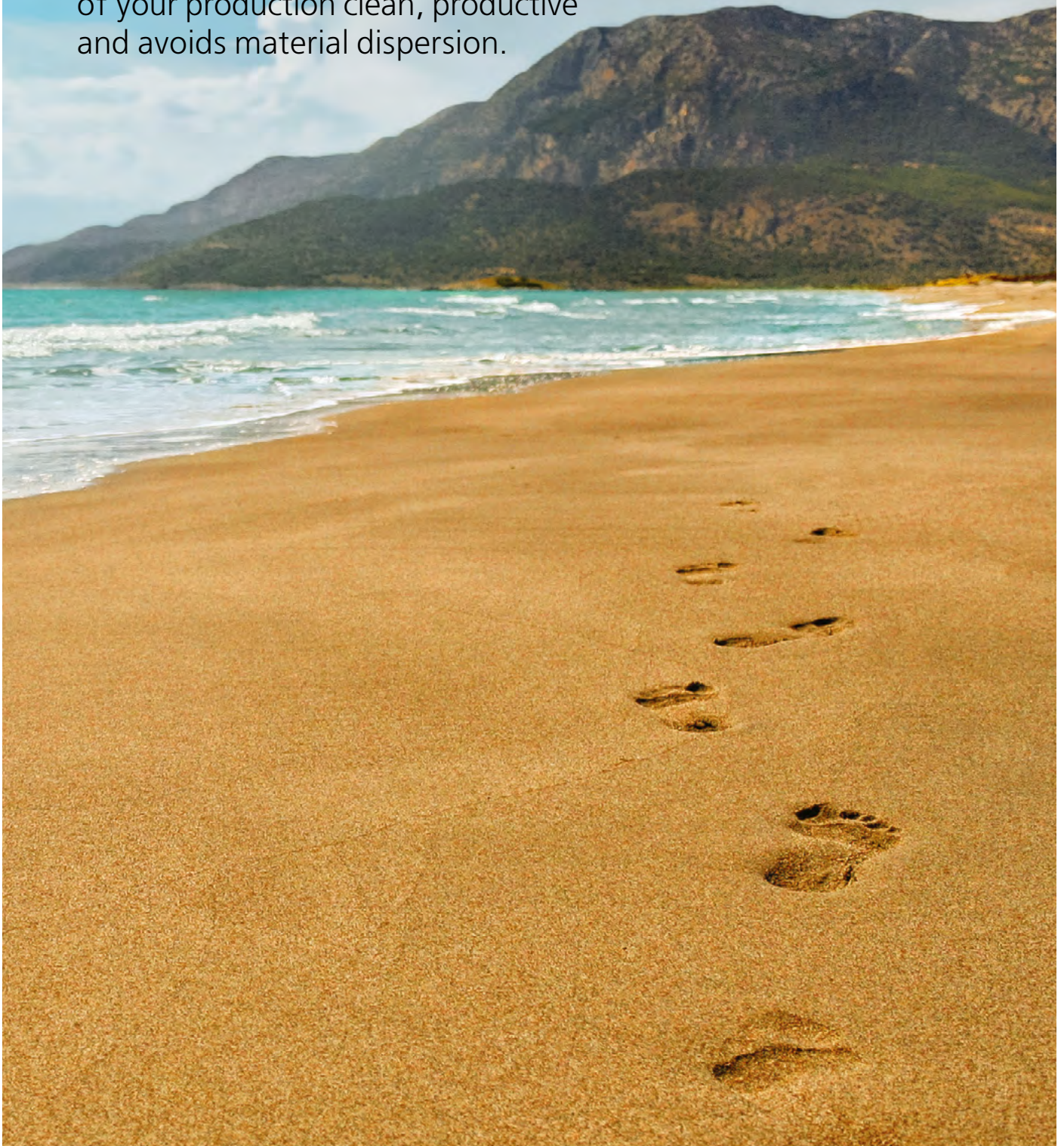
3 – DCSC-FMP-6, DCSC-FMP-F-6

— loaded filter  
— clean filter



# Every step tells a clean story

Our complete technology for product containment, air filtration and dust collection makes every step of your production clean, productive and avoids material dispersion.





# DCSC-W Stationary filter unit



## Description

Stationary wall mounted filter unit DCSC-W is designed for extraction and cleaning of air from aerosols and dusts emitted during welding, gas cutting, metal works and other dust generating applications. DCSC-S is intended for indoor operation. Unit is equipped with highly efficient compressed air pulse filter cleaning system. Connection to external compressed air supply is required. Additional cleaning efficiency is provided by vertical positioning of filter cartridges and special air splitter inserts installed in each filter cartridge of the unit.

## Industries and applications

- Welding processes
- Dust extraction

## Features

- Simple and robust design
- Different installation options
- Compatible with standard extraction arms
- Built-in fan (option)

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite

## Spare filter elements

Article №	Cartridge type (index)	Application area	Features
<b>Standard cartridges, 12 m<sup>2</sup></b>			
6900	Pcart-12	Dust with particle size over 0.5 µm.	Preliminary coating by sPreco-N is recommended (500 to 1000 g per 1 cartridge). It is essential to control and keep the recommended air flow.
		Welding aerosols	Preliminary coating by sPreco-N is required (500 to 1000 g per 1 cartridge). It is essential to control and keep the recommended air flow.
6901	Acart-12	Dust with particle size over 0.5 µm prone to electrostatic charge accumulation.	Preliminary coating by sPreco-N is recommended (500 to 1000 g per 1 cartridge). It is essential to control and keep the recommended air flow.
6903	Tcart-12	**Plasma, laser and gas cutting aerosols. Welding aerosols. Sublimates, soldering fumes. Various types of dust with majority of fine fraction (Dust with particle size less than 0.5 µm).	Preliminary coating is not necessary. For heavy duty applications. Higher speed of filtration is allowed. Longer cartridge life-time.
<b>Special cartridges, 10 m<sup>2</sup></b> For very rough working conditions.			
6908	Tcart-10	Welding aerosols. Sublimates, soldering fumes. Various types of dust with majority of fine fraction (Dust with particle size less than 0.5 µm).	Preliminary coating is not necessary. For very rough working conditions at thermal cutting of metals and similar processes. Higher speed of filtration is allowed. Longer cartridge life-time.



## Technical characteristics

Model	Airflow, m <sup>3</sup> /h	Filtration area, m <sup>2</sup>	No. of cartridges	Connection, mm	Dust bin	Fan model	Fan power, kW
<b>DCSC-W-1</b>							
<b>without fan</b>							
<b>DCSC-W-1-01</b>	1000	12/10	1	160	10l, hinged	-	-
<b>DCSC-W-1-03</b>	1000	12/10	1	160	40, floor	-	-
<b>with fan</b>							
<b>DCSC-W-1-00</b>	1000	12/10	1	160	10l, hinged	VM-p2500	1,2
<b>DCSC-W-1-02</b>	1000	12/10	1	160	40l, floor	VM-p2500	1,2
<b>DCSC-W-2x160</b>							
<b>without fan</b>							
<b>DCSC-W-2x160-01</b>	2x1000	2x12/2x10	2	160x2	10l, hinged	-	-
<b>DCSC-W-2x160-03</b>	2x1000	2x12/2x10	2	160x2	2x40l, floor	-	-
<b>with fan</b>							
<b>DCSC-W-2x160-00</b>	2x1000	2x12/2x10	2	160x2	10l, hinged	VM-6000	4,1
<b>DCSC-W-2x160-02</b>	2x1000	2x12/2x10	2	160x2	2x40l, floor	VM-6000	4,1
<b>DCSC-W-200</b>							
<b>without fan</b>							
<b>DCSC-W-200-01</b>	2000	2x12/2x10	2	200	10l, hinged	-	-
<b>DCSC-W-200-03</b>	2000	2x12/2x10	2	200	2x40l, floor	-	-
<b>with fan</b>							
<b>DCSC-W-200-00</b>	2000	2x12/2x10	2	200	10l, hinged	VM-6000	4,1
<b>DCSC-W-200-02</b>	2000	2x12/2x10	2	200	2x40l, floor	VM-6000	4,1



# GC Ion exchange modules gas cleaner



## Description

Ion exchange filter modules of GC series are designed for filtration of air from gas components emitted during welding or metal thermal cutting applications, paint works, galvanic treatment and others. GC filter module must be connected to the extraction ventilation system with appropriate design and capacity. Ion exchange filter modules must be installed as a last filtration stage in extraction ventilation system after the SovPlym fine filter units.

## Applications

- Different types of welding
- Metal thermal cutting
- Paint works
- Galvanic treatment

## Restrictions

Cannot be used for filtration of any kind of dust.

## Features and advantages

- Neutralizes the most common hazardous gas components: HF, HCl,  $N_xO_y$ ,  $SO_x$ , NaOH,  $C_xH_y$ ,  $H_2S$ ,  $NH_3$
- Suitable for almost all types of welding applications
- Allows using air recirculation in extraction systems for wide range of industrial applications

## Article numbers / Technical characteristics

	Article №	Model	Description
		GC-2	Stationary ion exchange module Airflow: 2000 m <sup>3</sup> /h Connecting flange cross-section: 582x620 mm Delivered with: sIEC-3-GC - ion exchange filter cartridge (1 pc). Adjustable legs (4 pcs).
	5422	GC-5	Stationary ion exchange module Airflow: 5000 m <sup>3</sup> /h Connecting flange cross-section: 582x1138 mm Delivered with: sIEC-3-GC - ion exchange filter cartridge (2 pc). Adjustable legs (4 pcs).
	5142	GC-10	Stationary ion exchange module Airflow: 10000 m <sup>3</sup> /h Connecting flange cross-section: 1102x1138 mm Delivered with: sIEC-3-GC - ion exchange filter cartridge (4 pc). Adjustable legs (4 pcs).
	5423	GC-20	Stationary ion exchange module Airflow: 20000 m <sup>3</sup> /h Connecting flange cross-section: 1102x2288 mm Delivered with: sIEC-3-GC - ion exchange filter cartridge (8 pc). Adjustable legs (4 pcs).

# SFB Silo filter unit



## Description

Self-cleaning automatic SFB filter unit in the cylindrical case is designed for continuous filtration of dry loose dust with initial concentrations up to 5 g/m<sup>3</sup>. Depending of the number of cylindrical filter cartridges filtration area of SFB filter unit can vary from 5 to 56 m<sup>2</sup>. Unit is equipped with highly efficient compressed air pulse cleaning system. SFB Silo filter unit is suitable for indoor and outdoor installations (on top of the silos loaded with overpressure). Unit can be equipped with the fan for applications that require creation of certain level of under pressure, for example silos or conveyor dedusting arrangements.

## Industries

- Chemical
- Metallurgy
- Metal works
- Ore mining
- Production of construction materials
- Engineering

## Applications

- Silos ventilation
- Aspiration of bulk materials pouring locations


## Features

- Does not require assembly
- Easy installation
- Compressed air cleaning system

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite

## Spare filter elements and accessories

	Article №	Model	Description
	24264 24265	P16/1000 P16/1200	Cylindrical cartridge, polyester
	* *	P16/1000 P16/1200	Cylindrical cartridge, polyester, aluminum frame
	* *	P16/1000 P16/1200	Cylindrical cartridge, PTFE
	* *	P16/1000 P16/1200	Cylindrical cartridge, PTFE, aluminum frame

\*Non standart item.

IMPORTANT NOTICE: Different models of SFB Filter unit and its spare filter elements and accessories are available on special request. Please contact us or our authorized representative.

This document information might be changed without notice. Product availability may differ by country.



# SFL Stationary filter unit



## Description

Self-cleaning SFL filter unit with flat filter cartridges is specially designed for applications with high initial concentration (up to 20 g/m<sup>3</sup>) of non-sticky and non-combustible dusts or fume particles. Filtration system with flat cartridges is capable of handling complex types of dusts such as graphite, chalk, fiberglass and similar. SFL unit is intended for indoor operation as a part of air extraction and cleaning system. Unit is equipped with highly efficient filter jet pulse compressed air filter cleaning system. Connection to external compressed air supply is required. Modular design of the SFL filter unit allows to easily increase the capacity of the filter if required.

## Applications

- Welding processes
- Food processing
- Dust extraction
- Metal thermal cutting
- Blasting and sandblasting
- Metal surface treatment
- Mechanical metal cutting
- Handling of dry bulk materials

## Industries

- Chemical
- Metallurgy
- Metal works
- Ore mining
- Production of construction materials
- Engineering

## Features

- Built-in fan
- Easy assembly and installation
- Flat design filter cartridges
- High filtration efficiency
- Effective air cleaning system
- Modular design

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite
- In case of sparking application, an additional spark protection measures are required

On special order this filter will fulfill ATEX conditions:  
Dust side 21, Clean side 22, Outside unit 22.

## Spare filter elements and accessories

	Article №	Description
	39940	Flat filter cartridge, polyester
	39941	Flat filter cartridge, polyester, aluminum frame
	39942	Flat filter cartridge, PTFE
	39943	

# SFN Filter unit with compressed air cleaning



## Description

The modular automatic self-cleaning SFN filter is designed for heavy dedusting applications with initial concentration of dust up to 50 g/m<sup>3</sup>. SFN is suitable for various types of dry dusts and for non-sticky fibrous materials. Modular structure of the SFN filter unit allows to vary the filtration surface from 3 m<sup>2</sup> to 60 m<sup>2</sup> depending on number of filter pockets installed. Unit is equipped with highly effective compressed air pulse cleaning system that is activated automatically. SFN unit is suitable for indoor and outdoor installations. SFM filter is available in two versions — stand-alone stationary unit and bunker type unit for silos and conveyor dedusting.

## Industries

- Welding
- Food processing
- Aspiration of technological processes
- Blasting and sandblasting
- Metal surface treatment
- Metal thermal cutting
- Mechanical metal cutting
- Processing of bulky materials

## Applications

- Chemical
- Metallurgy
- Metal works
- Ore mining
- Production of construction materials
- Engineering


## Features

- Easy assembly and installation
- Suitable for heavy applications
- Compressed air filter cleaning system
- Modular design
- Two stage filtration with additional module (option)

## Restrictions

In case of sparkling application, an additional spark protection measures are required.

## Spare filter elements and accessories

	Article №	Model	Description
	* * *	Short Long Super Long	Filtering flat pocket, polyester
	* * *	Short Long Super Long	Filtering flat pocket, polyester, aluminum frame
	* * *	Short Long Super Long	Filtering flat pocket, oil- and water-repellent
	* * *	Short Long Super Long	Filtering flat pocket, oil- and water-repellent, aluminum frame

\*Non standart item.

IMPORTANT NOTICE: Different models of SFN Filter unit and its spare filter elements and accessories are available on special request. Please contact us or our authorized representative.

This document information might be changed without notice. Product availability may differ by country.

# SFM Filter unit with mechanical filter cleaning system



## Description

SFM filter unit is designed for cleaning of air or gases from the dry, loose and not self-ignitable dusts of different kind. It is a complete semi-automatic filter unit equipped pocket filter cartridges. Scalable modular design allows increasing the total filtration surface of SFM filter unit to up to 180 m<sup>2</sup>. Filter pockets are cleaned with mechanical stirring system. The SFM filter is suitable for indoor and outdoor installations. SFM filter is available in two versions – stand-alone stationary unit and bunker type unit for silos and conveyor dedusting. Optionally the filter can be equipped with a fan.

## Industries

- Aspiration of technological processes
- Aspiration of places of pouring
- Blasting and sandblasting
- Metal surface treatment
- Metal thermal cutting

## Applications

- Chemical
- Metallurgy
- Metal works
- Ore mining
- Production of construction materials
- Engineering


## Features

- Easy assembly and installation
- Flat filter pockets for heavy applications
- Mechanical filter cleaning system
- Two stage filtration with additional module (option)

## Restrictions

- Not suitable for explosive or combustible substances
- Not suitable for materials that tend to smolder or self-ignite
- For effective filter cleaning a temporary shutdown of the filter is required

## Spare filter elements and accessories

	Article №	Model	Description
	*		Filter pockets, cotton
	*		Filter pockets, polypropylene
	*		Filter pockets, polyester, aluminum frame
	*		Filter pockets, perlon silk

\*Non standart item.

IMPORTANT NOTICE: Different models of SFM Filter unit and its spare filter elements and accessories are available on special request. Please contact us or our authorized representative.



# PU Dust collector



## Description

Robust and compact PU Dust Collector equipped with cleanable bag filters is designed for extraction of coarse and fine dust from various metal work applications such as sharpening, grinding and blasting. It is also suitable for other types of applications for extraction of dry, non-explosive and non-sticky dust. Filtration efficiency of PU Dust Collectors for the coarse dust is up to 92%.

## Industries and applications

- Metalwork
- Construction materials
- Chemical industry
- Engineering
- Automotive industry

## Features

- 2-stage filtration
- Manual filter cleaning system
- Low lifetime costs
- Free standing unit
- Compatible with fans of different capacities

## Restrictions

- Not suitable for extraction of explosive mixtures as well as for dust that tend to smolder or self-ignite
- Temperature of extracted air must not exceed +80 °C.

## Article numbers / Technical characteristics

Article №	Model	Max airflow, m³/h	Max pressure drop, Pa	Filter surface, m²	Inlet/outlet diameter, mm	Weight, kg
5511	PU-800	800	1000	4,2 16 sleeves 100 mm	160/160	50
5512	PU-1500	1500	1100	5,0 19 sleeves 100 mm	160/250	70
5513	PU-2500	2500	1100	8,2 31 sleeves 100 mm	250/250	90
5514	PU-4000	4000	1200	9,8 37 sleeves 100 mm	280/250	100

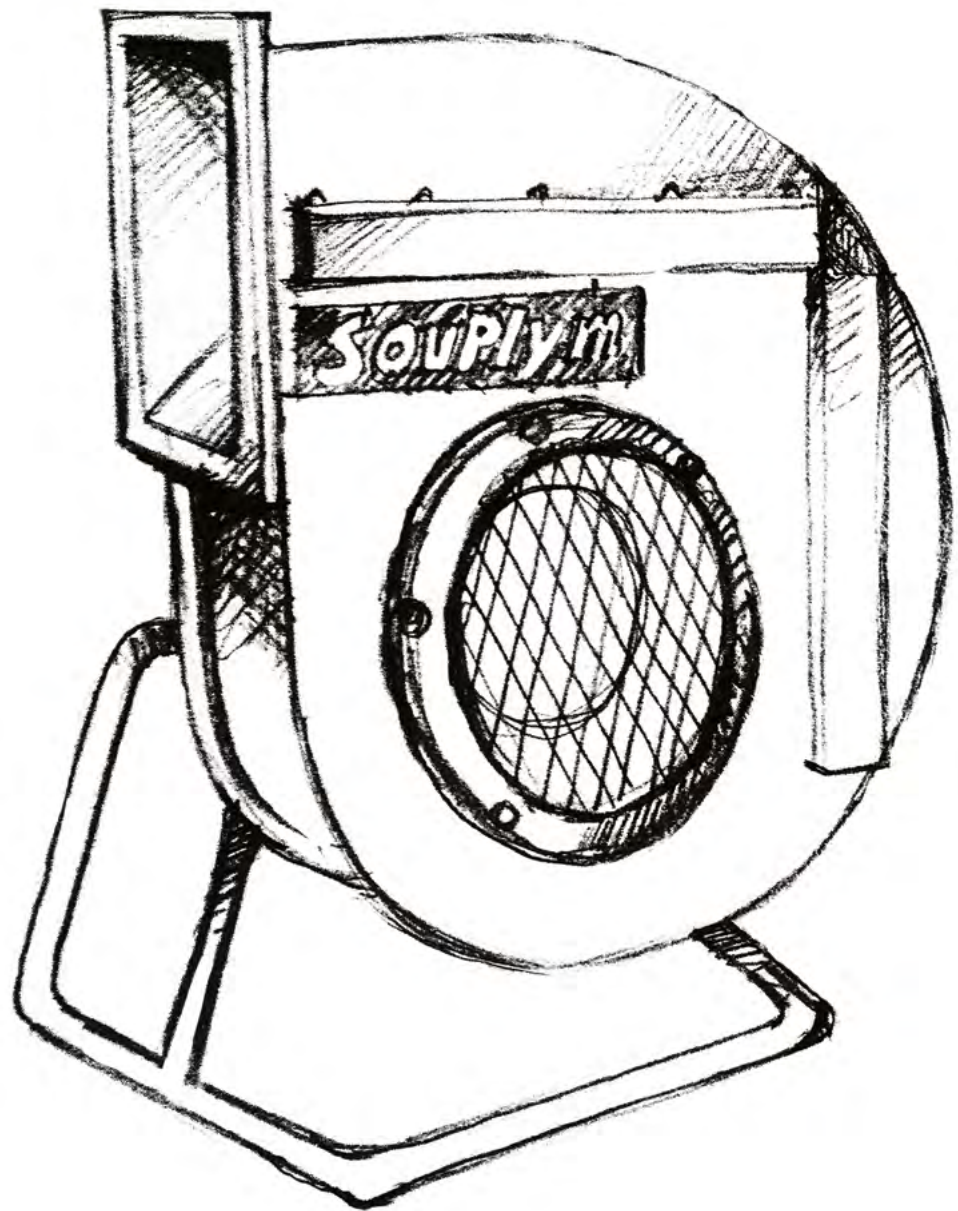
## Applications / Installations



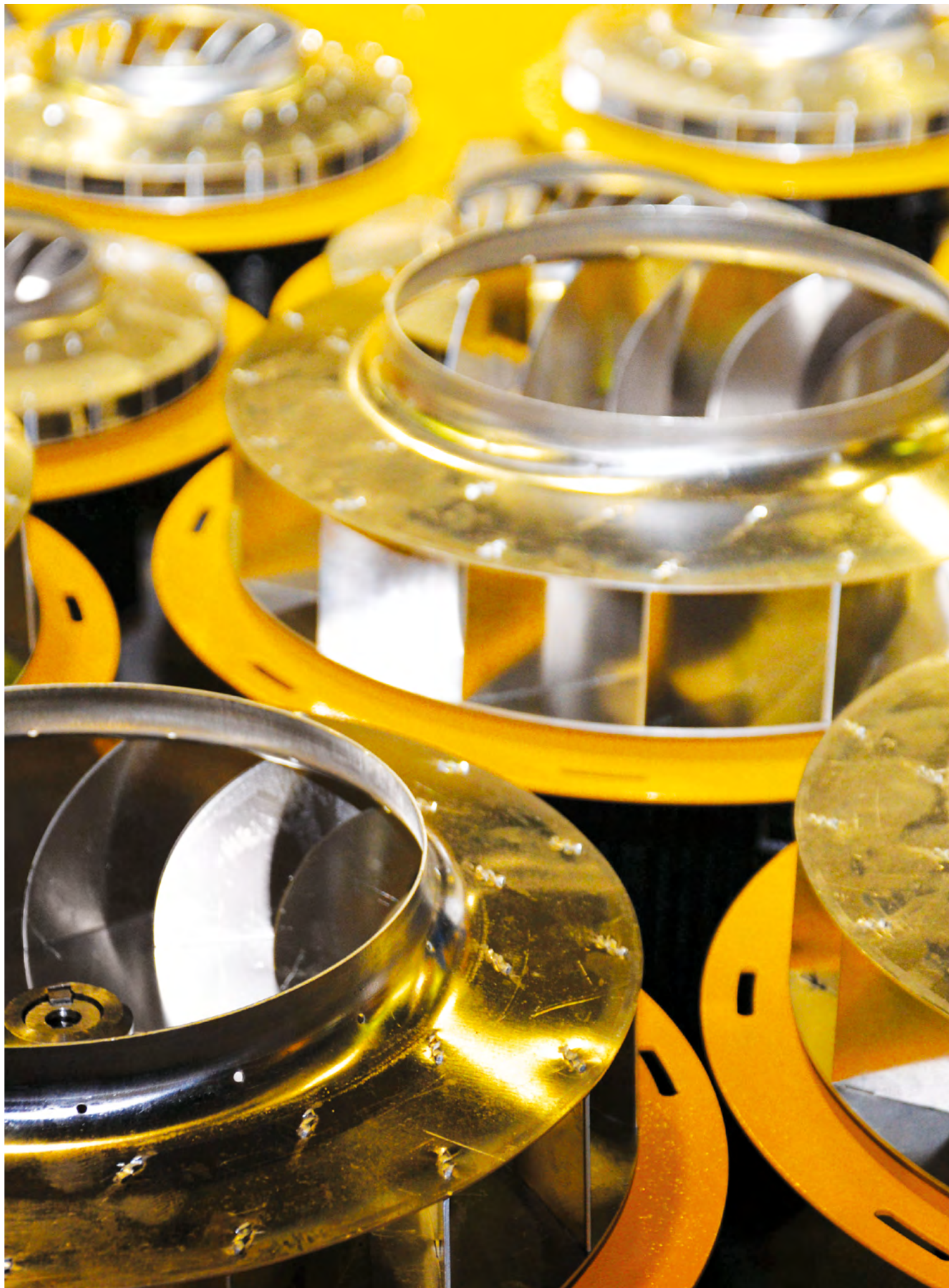


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# Fans









# PRODUCT GUIDE



## VMA, VMK, VMS

Top quality radial, medium pressure fans. Airflow 150-5000 m<sup>3</sup>/h, full pressure 1100-2450 Pa. Several installation options: mounting brackets, direct to filter units, floor stands.



## TEF, TEFnr

Energy efficient radial, medium pressure fans. Airflow 500-12000 m<sup>3</sup>/h, full pressure 1550-4300 Pa. Square shaped body with additional vibration dampers allows both floor and wall installation. Equipped with light silencing enclosure (TEFnr).



## HPF

High capacity radial industrial fans with medium pressure. Airflow 12000-20000 m<sup>3</sup>/h, full pressure 2800-4300 Pa. Available with silencing casing and additional vibration dampers or pre-installed on a solid metal frame.



## Customized industrial fans

SovPlym produces a large variety of customized industrial fans, according to special requests or for special applications. Customized SovPlym fans can be made of different materials, in special design or fans equipped with special kind of motors.

# VMK, VMA, VMS Industrial Fans



## Description

The VentMax series of medium-pressure fans offer flow rates up to 5000 m<sup>3</sup>/h and pressures up to 3400 Pa. These fans are suitable for non-explosive environments with temperature range from -40°C to +40°C.

## Industries and applications

SovPlym fans are suitable for wide range of applications that require suction of clean or slightly dusty air:

- Welding applications
- Vehicle exhaust removal
- Removal of oil mists and fumes
- Removal of non-sticky and non-explosive kinds of dust

## Advantages

- Low vibration
- Easy installation
- Long service intervals
- Robust design
- Low noise level
- High-quality powder coating

The case is coated with high-quality powder paint that has corrosion-resistant properties and modern appearance.

Robust steel case allows fan mounting at suction part.

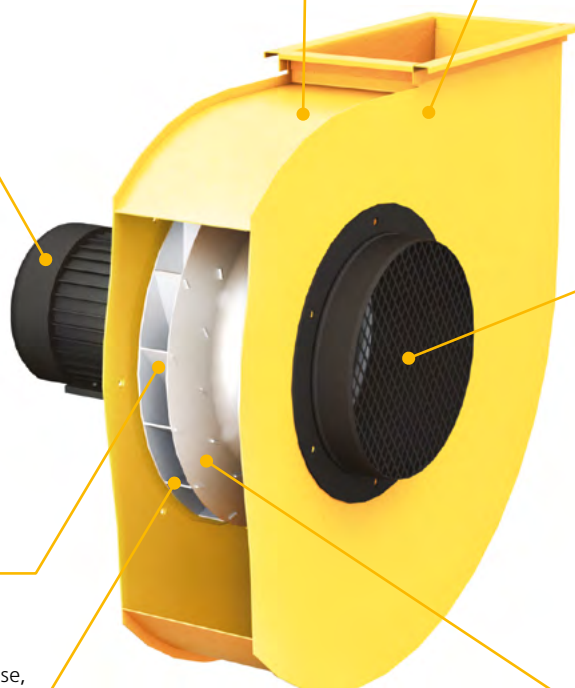
Reliable motors.

The grid is located at a safe distance from impeller.

Aluminium impeller:  
- lower engine load;  
- lower power consumption;  
- higher corrosion resistance;  
- lower fan weight;  
- longer life of bearings;  
- low vibrations.

The design and optimal geometry of impeller provide lower vibration and noise, and higher performance.

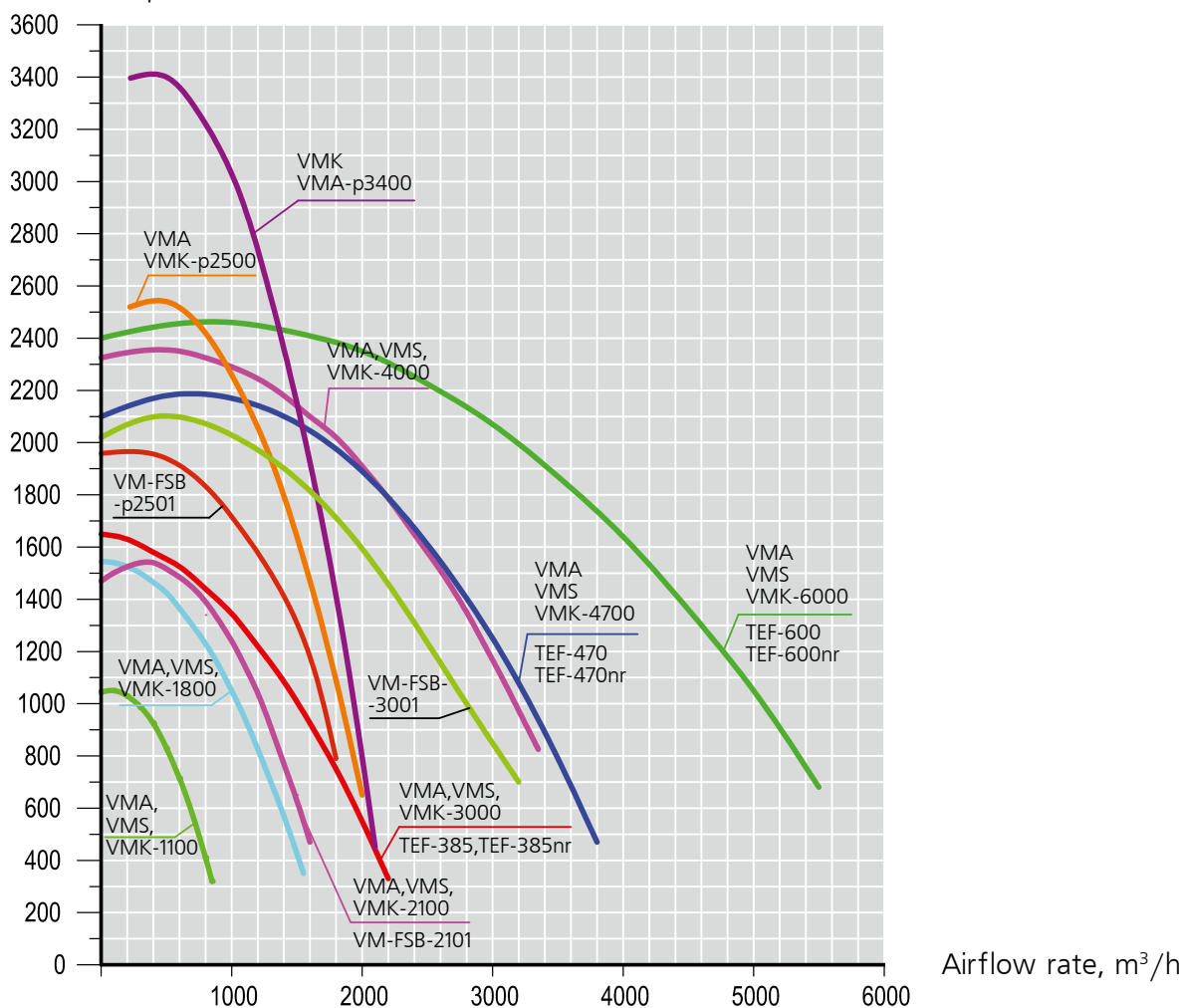
All fans are individually balanced on special dynamic benches.





## Aerodynamic characteristics

Pressure drop, Pa



### VMA (VMD) fan series

Specially designed for installation on the SovPlym filter units. Reinforced body of the fan allows to mount it directly onto the filter unit. Fans of VMD series are mounted vertically.



### VMS (VM-FSB) fan series

These fans are delivered with a floor stand and handle for carrying. VM-FSB fans with round outlets are specially designed for air supply of trampolines and other inflatable constructions.



### VMK fan series

VMK fans are delivered with mounting brackets that allow installing the fan practically in any position.

## Accessories

T-adapters T250-260 are designed for connection of round-shaped fan inlet of VMK, VMA and VM-FS fans to the flexible or hard round air duct.

	<b>sT250-160-1</b>	T-adapter for connection of one extraction arm to VMK fans with flexible hoses.
	<b>sT250-160-2</b>	T-adapter for connection of two extraction arms to VMK fans with flexible hoses.
	<b>sOL adapter</b>	Adapter for connection of rectangular-shaped outlets of VMK, VMA, VM-FS, TEF fans to a hard or flexible round-shaped air duct. OL adapter is also required for mounting the silencer of GTK series or similar.
	<b>Cone sPK</b>	PK cone adapters are required for connection of flexible hoses of different diameters to the inlets of fans of VMK, VMA, and VMS series.

## Applications / Installations



## General specifications

Art. №	Fan model	Optimal operating mode		Motor				Weight, kg		
		Pressure range, Pa	Capacity, m³/h	Power, kW	Voltage, V	Current frequency, Hz	RPM			
5784	VMK-1100	1100-400	150-800	0,37	380-415, 3 phase	50	2730	11		
5780	VMA-1100							10		
5786	VMS-1100							15		
5782	VMFA-1100							10		
5785	VMK-1101				220, 1 phase		2850	11		
5781	VMA-1101							10		
5787	VMS-1101							15		
5783	VMFA-1101							10		
5045	VMK-1800	1500-700	300-1300	0,55	380-415, 3 phase		2730	19		
5044	VMA-1800							14,5		
5042	VMS-1800							19		
6041	VMFA-1800							14,5		
5071	VMK-1801				220, 1 phase		2840	21,8		
5072	VMA-1801							17,3		
5043	VMC-1801							21,8		
6041	VMFA-1801							17,3		
5050	VMK-2100	1550-650	300-1500	0,75	380-415, 3 phase		2820	21,6		
5049	VMA-2100							17,1		
5046	VMS-2100							21,6		
6013	VMFA-2100							17,1		
5073	VMK-2101				220, 1 phase		2790	22,5		
5074	VMA-2101							18		
5047	VMS-2101							22,5		
6036	VMFA-2101							18		
5058	VMK-3000	1550-700	500-1900	1,1	380-415, 3 phase		2800	27		
5056	VMA-3000							23		
5051	VMS-3000							27		
5075	VMK-3001							28		
5076	VMA-3001				220, 1 phase		2780	24		
5053	VMS-3001							28		
5194	VMK-p2500							2870	25	
5119	VMA-p2500								21	
6061	VMFA-p2500	23								
5195	VMK-p2501	25								
5120	VMA-p2501	21								
6062	VMFA-p2501	23								
5087	VMK-p3400	3400-2000	400-1600	1,5	380-415, 3 phase		2880	35		
5086	VMA-p3400							31		
5728	VMK-4000	2320-800	800-3400					380-415, 3 phase	2790	33
5720	VMA-4000									29
5736	VMS-4000				33					
5729	VMK-4001				34					
5721	VMA-4001				220, 1 phase			2790	30	
5737	VMS-4001								34	
5062	VMK-4700	2200-800	800-3500	2,2	380-415, 3 phase		2860	43		
5061	VMA-4700							37		
5060	VMS-4700							42		
5624	VMD-4700							42		
5266	VMK-6000	2450-1000	1000-5000	4			2850	60		
5269	VMA-6000							53		
5268	VMS-6000							60		
5625	VMD-6000							60		

Note: SovPlym has the right to modify electrical motor design.

\* VMFS — is applied in set with extraction hose reel, see the SovPlym catalog «Vehicle exhaust removal systems».

\*\* VMN — to be installed at DCSC-S filters, see respective pages of the catalog.

This document information might be changed without notice. Product availability may differ by country.



# TEF Industrial energy-efficient fans



## Description

TEF radial medium-pressure Energy Fans offers flow rates up to 12000 m<sup>3</sup>/h and pressures upto 3600 Pa. These fans are suitable for non-explosive environments with temperature range from -40 to +80 °C.

## Industries and applications

SovPlym fans are suitable for wide range of applications that require suction of clean or slightly dusty air:

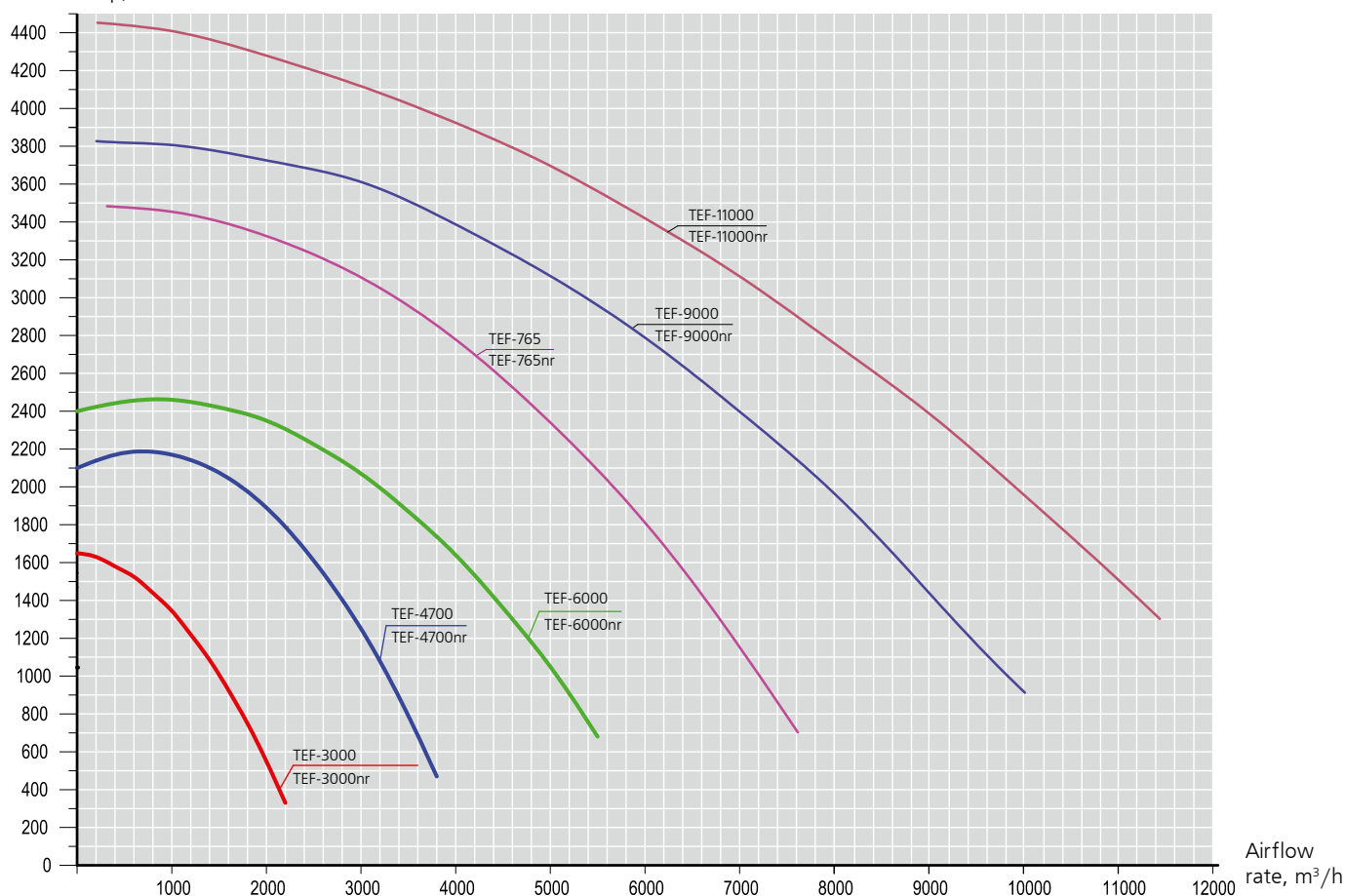
- Welding applications
- Vehicle exhaust removal
- Removal of oil mists and fumes
- Removal of non-sticky and non-explosive kinds of dust

## Advantages

- Low vibration
- Low noise level
- Robust design
- Long service life
- Easy installation
- High energy-efficiency

## Pressure drop diagram

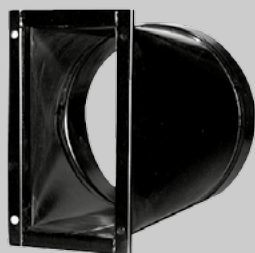
Pressure drop, Pa



## Article numbers/Characteristics

Art. №	Fan model	Optimal operating mode		Electric motor, 3 phase				Weight, kg
		Pressure, Pa	Airflow, m³/h	Power, kW	Voltage, V	Current frequency, Hz	RPM	
The fan case does not have noise-reduction properties								
5405	TEF-385	1550-700	500-1900	1,1	380	50	2810	30
5400	TEF-470	2200-800	800-3500	2,2	380	50	2860	48
5402	TEF-600	2450-1000	1000-5000	4,0	380	50	2850	63
5078	TEF-765	3400-1200	1400-6900	5,5	380	50	2850	80
5180	TEF-9000	3750-1400	1600-9000	7,5	380	50	2910	150
5191	TEF-11000	4300-1400	1800-11200	11,0	380	50	2890	185
The fan is equipped with noise-reduction enclosure								
5406	TEF-385nr	1550-700	500-1900	1,1	380	50	2810	46
5401	TEF-470nr	2200-800	800-3500	2,2	380	50	2860	75
5403	TEF-600nr	2450-1000	1000-5000	4,0	380	50	2850	90
5079	TEF-765nr	3400-1200	1400-6900	5,5	380	50	2850	110
5103	TEF-9000nr	3750-1400	1600-9000	7,5	380	50	2910	195
5104	TEF-11000nr	4300-1400	1800-11200	11,0	380	50	2890	255

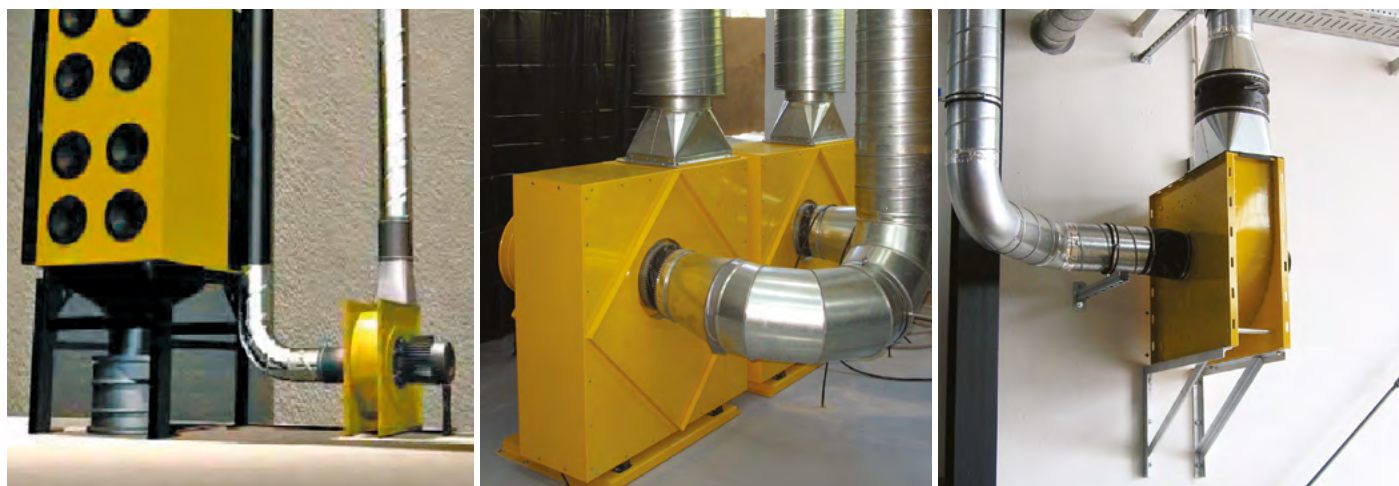
## Accessories



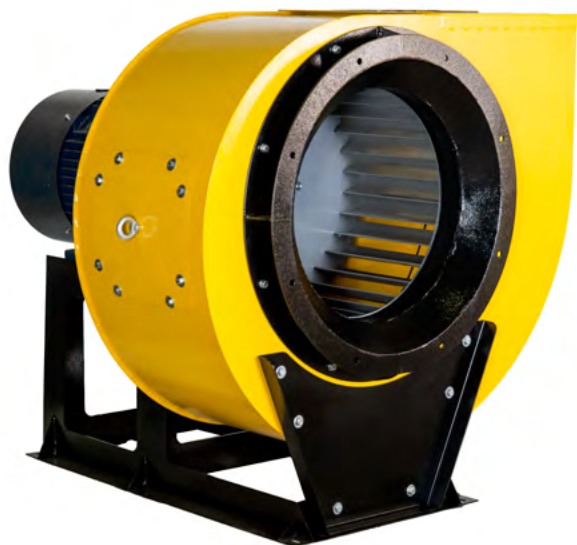
**sOL adapter**

Adapter for connection of rectangular-shaped outlets of VMK, VMA, VM-FS, TEF fans to a hard or flexible round-shaped air duct. OL adapter is also required for mounting the silencer of GTK series or similar.

## Applications / Installations



# HPF High pressure fans



## Description

SovPlym's series of industrial High Pressure Fans (HPF) offers flow rates up to 20000 m<sup>3</sup>/h and pressures up to 4300 Pa. These fans are suitable for non-explosive environments with temperature range from -40 to +80 °C.

## Industries and applications

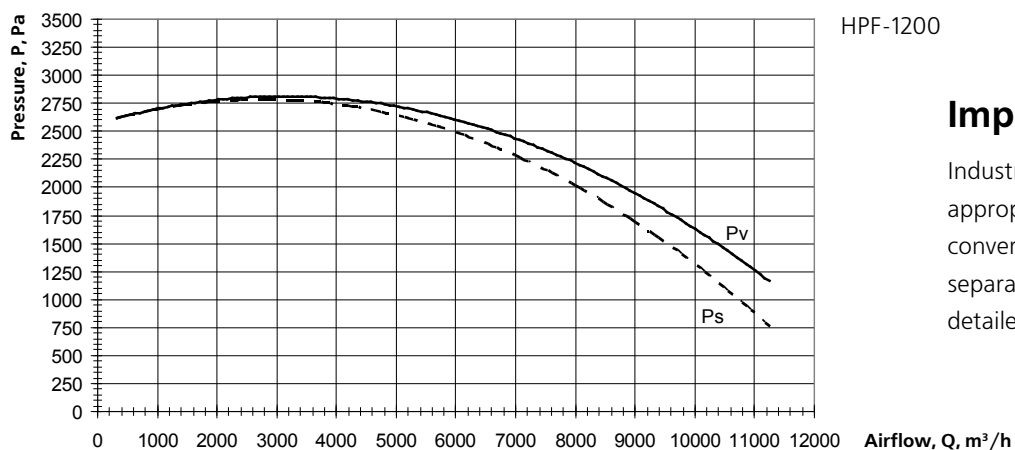
SovPlym fans are suitable for wide range of applications that require suction of clean or slightly dusty air:

- Welding applications
- Vehicle exhaust removal
- Removal of oil mists and fumes
- Removal of non-sticky and non explosive kinds of dust

## Advantages

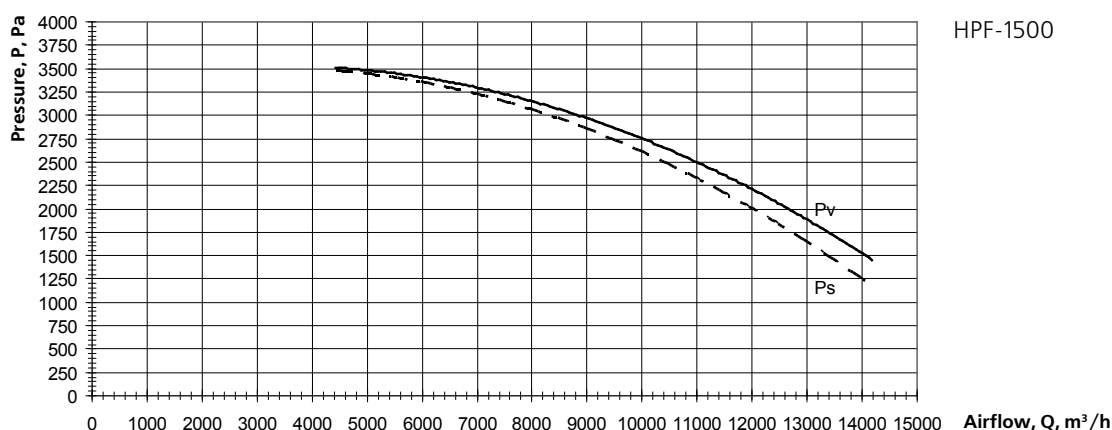
- Low vibration
- Long service life
- Low noise level
- Easy installation
- Robust design
- High energy-efficiency

## Aerodynamic characteristics of fans



## Important notice

Industrial fans must be equipped with appropriate soft start controls or frequency converters that should be ordered separately. Consult our specialists for more detailed information.

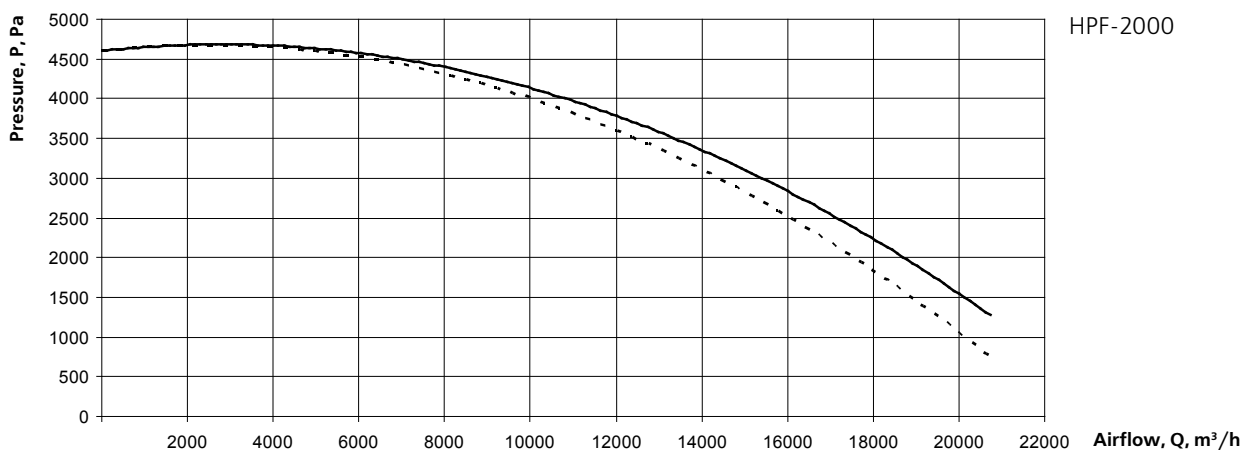




## Article numbers / Technical characteristics

Article №	Fan type	Type of body	Full pressure, Pa	Airflow, m <sup>3</sup> /h	Electric motor (3 phase)			Noise level dB	Weight, kg
					Power, kW	Voltage, V	Frequency, Hz		
24165	<b>HPF-1200</b>	Standard	2800-1100	2000-12000	7,5	380	50	90	142
24164	<b>HPF-1500</b>	Standard	3500-1200	2500-15000	11	380	50	95	212
25096	<b>HPF-2000</b>	Standard	4300-1400	5000-20000	22	380	50	100	291
24166	<b>HPF-1200/LI</b>	Silencing casing (left inspection door)	2800-1100	2000-12000	7,5	380	50	80	287
22754	<b>HPF-1500/LI</b>	Silencing casing (left inspection door)	3500-1200	2500-15000	11	380	50	85	437
24999	<b>HPF-2000/LI</b>	Silencing casing (left inspection door)	4300-1400	5000-20000	22	380	50	90	527
25000	<b>HPF-1200/RI</b>	Silencing casing (right inspection door)	2800-1100	2000-12000	7,5	380	50	80	287
25041	<b>HPF-1500/RI</b>	Silencing casing (right inspection door)	3500-1200	2500-15000	11	380	50	85	437
25050	<b>HPF-2000/RI</b>	Silencing casing (right inspection door)	4300-1400	5000-20000	22	380	50	90	527

## Aerodynamic characteristics of fan



# Customized industrial fans



SovPlym offers wide range of customized industrial fans that can be designed and produced according to special requests. Send a request for customized product with the description of application and our specialists will offer you the most suitable solution built in total accordance to your requirements.

Consult your local salesperson for more information on fans with higher capacity.

Customization options may include:

- special shape of the outlet
- custom made flanges
- material of the fan body and impeller
- type of motor
- special type of coating or body color
- other design changes.

Here are several examples of the most common customized products.



## Plastic body industrial fan

Plastic case fans have a huge advantage when a portable fan unit is required. They are much lighter than metal cased fans and therefore often requested for applications when the reduced weight of the fan is required because of the mounting restrictions. For certain applications plastic cases can provide additional corrosive or abrasive resistance.



## Industrial Fan with custom made outlet (for inflated trampolines)

SovPlym production is able to produce industrial fans with customized outlets suitable for connection to various ducts or hoses. One of the most popular products is the FSB high pressure fan with round outlet that is suitable for connection to inflatable constructions such as trampolines. Customized shape of the outlet or inlet (in certain cases) will make the fan mounting much easier and convenient and ensure absence of leakages or pressure losses.



## Fans equipped with special types of motors

Industrial fans are used in various environments and often require special type of motors and electrical components. Range of SovPlym custom build fans includes fans with ATEX approved motors, motors with increased energy-efficiency and other types of specialized motors.

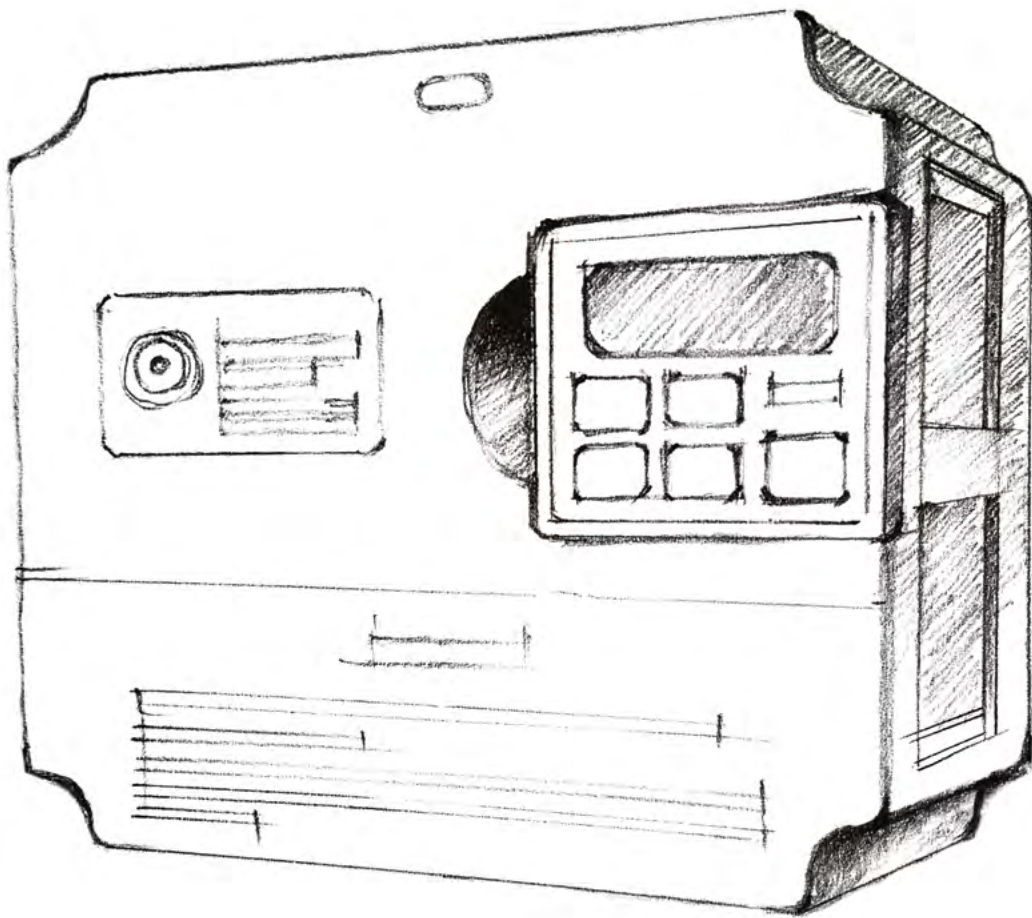






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# Control equipment





## AD

Automatic damper, electrically driven.



## ICE-LC

Control box for automatic damper.



## Control Panel

Control panel for DCSC-S filter units. Controls filter cleaning system.



## Frequency converter

Adjusts the fan speed due to information from the signal coordination (USS) to maintain required airflow.



## USS

Signal coordinator. Collects all signals from different sensors.





### Pressure sensor

Adjusts the air delivery by adjusting air volume based on duct system pressure.



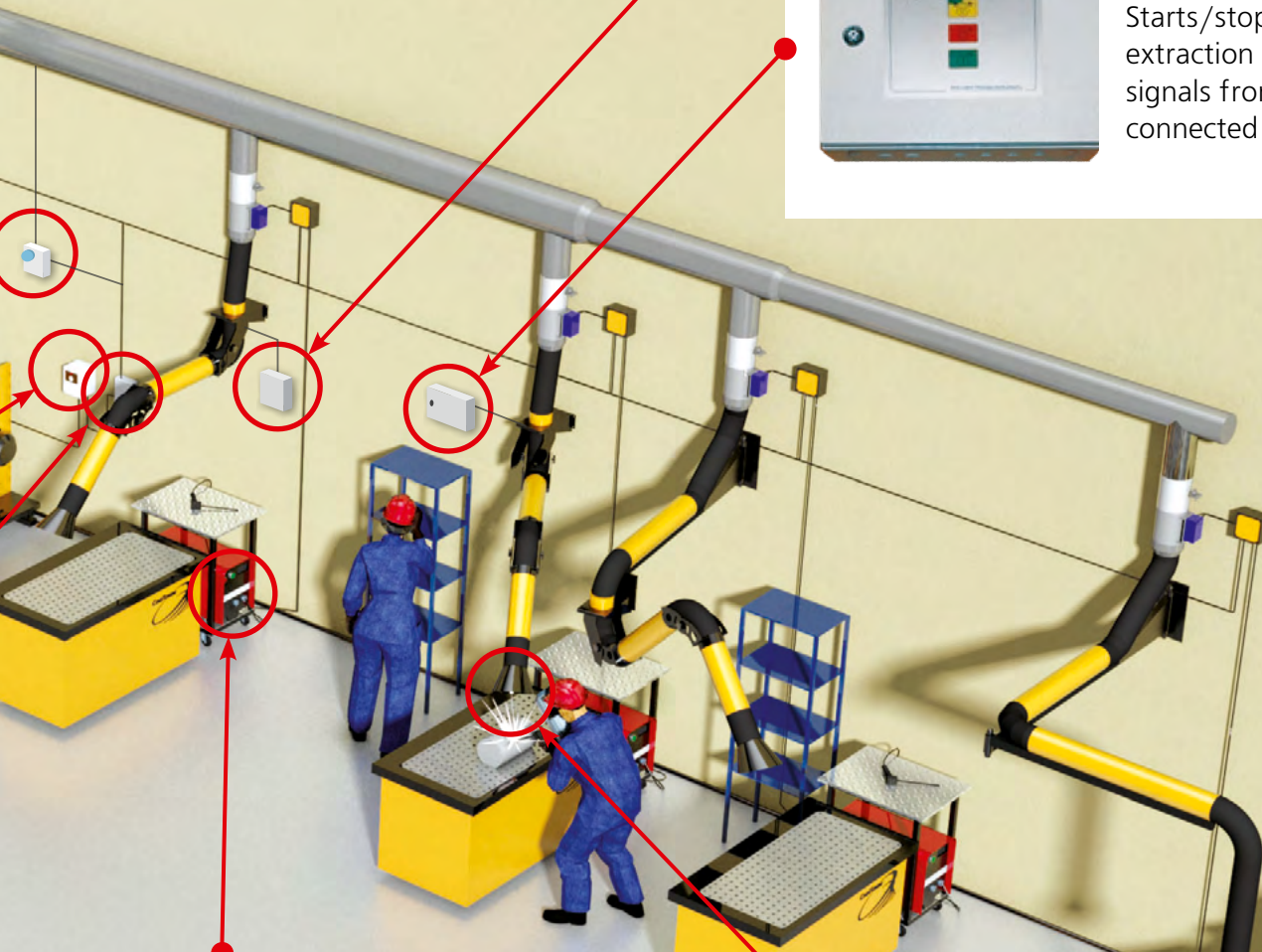
### CB

Control box for extraction arms with on/off switches on the funnel.



### EC

Energy control. Starts/stops the extraction fan at signals from the connected sensors.



### MCC

Induction sensor, attached to the ground cable. Detects electrical current when the welding starts.



### Light sensor

Light sensor attached to extraction funnel. Detects welding start/stop on the basis of light intensity.

# Intelligent control system



## Pressure sensor

Adjusts the air delivery by adjusting air volume based on duct system pressure. Monitors the pressure in the ventilation system and sends corresponding signals to frequency converter to adjust the fan rpm. Pressure sensor allows maintaining constant pressure level inside the system. Also used in Push-Pull systems, together with Control Panel.



## MCC

Induction sensor attached to ground cable of the welding machine. Reacts to electrical current when welding starts.



## Light sensor

Light sensor attached to extraction funnel. Reacts on the light emitted by welding process. Alternative to induction sensor for low-amperage types of welding processes.



## USS

Signal coordination device. Collects all signals sent by sensors and adjust the fan rpm through frequency converter. Supports up to 8 sensors connection.



## AD

Automatic damper, electrically driven. Available in diameters from 100mm to 400 mm. Operates by signal from ICE-LC control box.



## Frequency converter

Adjusts frequency of the fan motor by signals from signal coordination device (USS) to maintain required airflow. Can be used alternatively to fan starter.



## ICE-LC

Control box for AD automatic damper. Ready for remote connections from switches or sensors.



## CB

Control box for extraction arms with on/off switches and/or light switch on the funnel. Allows start/stop the fan by funnel switches. Equipped with transformer suitable for 5 20W lamps connections.



## Control Panel

Control panel for DCSC-S filter units. Controls all functions and the filter cleaning system. Equipped with programmable logic controller to set length of cleaning pulse, time between pulses and number of filter cleaning cycles after fan stop. It supports up to 32 pneumatic valves. Fan starter or frequency converter are not included into delivery package and should be ordered separately.



## EC

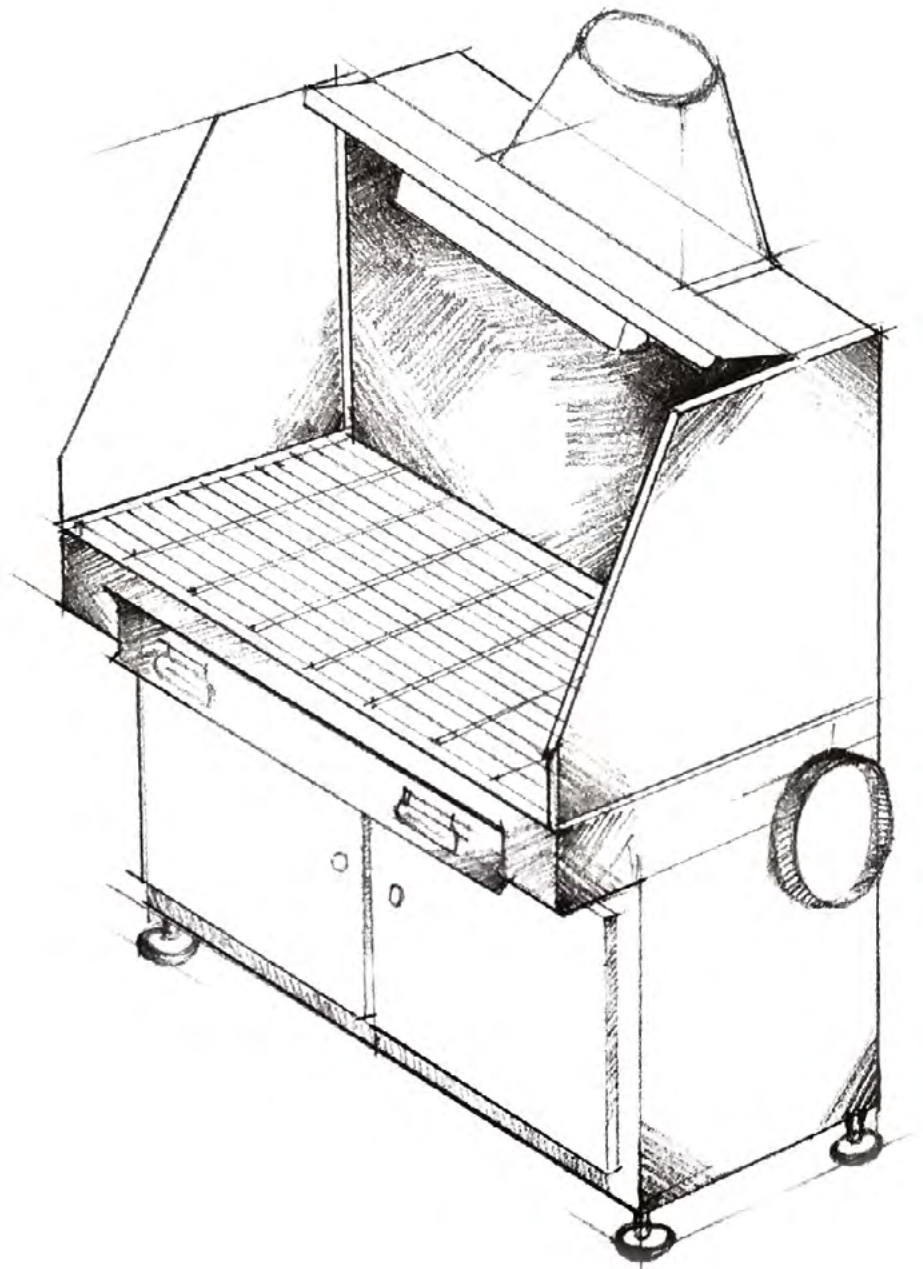
Energy control device. Starts/stops the extraction fan by signal from connected sensors (sensors should be ordered separately). Has adjustable setting for additional fan run time after welding is finished. Equipped with transformer for built-in extraction funnel light bulb.





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# Welding & thermal cutting tables









# PRODUCT GUIDE



## WT-CCZ-1200

Professional downdraft table. For dust and fumes from welding, hand tool grinding or other similar processes. Equipped with protection screens and adjustable legs. Needs connection to extraction system. Recommended fan capacity 1200-2500 m<sup>3</sup>/h.



## WT-CCZ-2500

Advanced downdraft table for welding and grinding. Double extraction panels: table top and at the rear wall. Recommended fan capacity 2500-3000 m<sup>3</sup>/h. Comes with two protective side screens and adjustable legs. Connection to extraction system is required.



## WT-CCB-1200

Basic welding downdraft table with filtration system. Equipped with extraction arm. Built-in fan with 1200 m<sup>3</sup>/h capacity. Adjustable legs. Needs compressed air supply. Can be equipped with built-in air compressor as an option.



## WT-CCM-1200

Professional welding downdraft table with filtration system. A complete workstation for any type of welding. Equipped with extraction arm, protective screens, luminescent lamp, turning table for small parts and adjustable legs. Capacity of the built-in fan is 1200 m<sup>3</sup>/h. Compressed air supply is required.



## CCT

Modular downdraft extraction table for thermal metal cutting. For extraction of fumes and dusts from laser, plasma, gas and other types of thermal cutting. Modular design allows easy change of shape and capacity of the table. Requires connection to appropriate ventilation system including fine filter.

# WT-CCZ-1200 Welding-grinding table



## Description

WT-CCZ-1200 is a professional welding and grinding work-station that effectively removes all air pollutants from the working zone. WT-CCZ-1200 is well suited for fumes and dust extraction during MIG/MAG welding processes or inert gas welding with consumable electrodes and machining processes of grinding, polishing and similar. The table must be connected to the external air extraction system. It is highly recommended to use SovPlym filter units to clean the air extracted from WT-CCZ-1200.

## Applications

- Welding processes
- Machining processes (grinding, polishing, sharpening etc.)

## Features

- Adjustable height of the table
- Robust carbon steel grate working surface
- Equipped with spark-arrester
- Removable side protection panels
- Lockable toolbox
- Delivered with built-in lights

## Restrictions

- Not suitable for thermal metal cutting applications
- Not suitable for operation in the presence of explosive dust or aerosols or aggressive vapors and gases
- Not suitable for extraction of dusts, fumes and gases that tend to smolder and self-ignite

## Technical characteristics

Max. allowed load, kg	Height of the table surface, mm	Max airflow, m <sup>3</sup> /h	Pressure drop, Pa	Connection diameter, mm	Weight, kg
100	852	2500	400	200	150

## Article numbers

Article №	Model
5492	WT-CCZ-1200

## Delivery set / Standard kit info

- Flexible protection screen
- Luminescent lamp
- Built-in spark arrester
- Flanges for air ducts connections
- Withdrawable tray
- Steel grate



# WT-CCZ-2500 Welding-grinding table



## Description

WT-CCZ-2500 is a professional welding and grinding workstation that effectively removes all air pollutants from the working zone. WT-CCZ-2500 is well suited for fumes and dust extraction during MIG/MAG welding processes or inert gas welding with consumable electrodes and machining processes of grinding, polishing and similar. The table must be connected to the external air extraction system. It is highly recommended to use SovPlym filter units to clean the air extracted from WT-CCZ-2500.

## Applications

- Welding processes
- Machining processes (grinding, polishing, sharpening etc.)

## Features

- Adjustable height of the table
- Robust carbon steel grate working surface
- Equipped with spark-arrester
- Removable side protection panels
- Extraction through bottom and back panel
- Delivered with built-in lights

## Restrictions

- Not suitable for thermal metal cutting applications
- Not suitable for operation in the presence of explosive dust or aerosols or aggressive vapors and gases
- Not suitable for extraction of dusts, fumes and gases that tend to smolder and self-ignite

## Technical characteristics

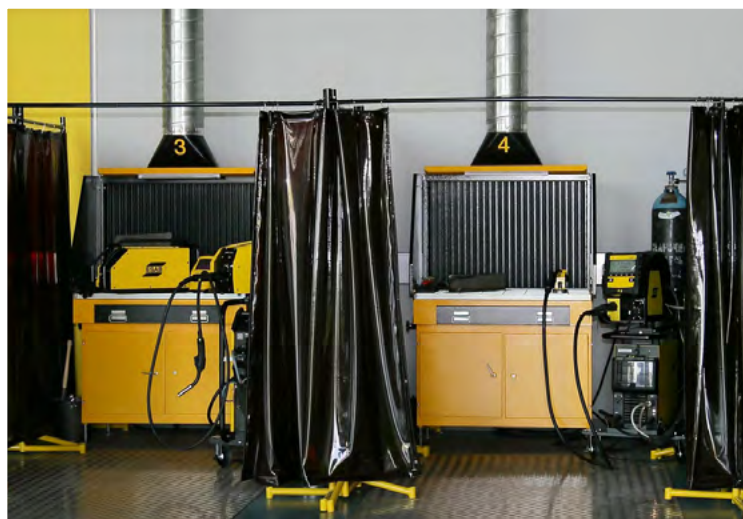
Max. allowed load, kg	Height of the table surface, mm	Max airflow, m <sup>3</sup> /h	Pressure drop, Pa	Connection diameter, mm	Weight, kg
100	833	2500	160	250	153

## Article numbers

Article №	Model
5479	WT-CCZ-2500

## Delivery set / Standard kit info

- Steelside protective screens
- Back extraction panel
- Luminescent lamp
- Built-in spark arrester
- Flanges for air ducts connections
- Withdrawable tray
- Steel grate





# WT-CCB-1200 Welding table



## Description

WT-CCB-1200 is a complete welding workstation that effectively captures and filters the welding fumes generated during welding operations. WT-CCB-1200 is designed for fumes extraction during MIG/MAG welding processes or inert gas welding with consumable electrodes. Unit is equipped with built-in filter cleaning system that requires connection to external compressed air supply. WT-CCB-1200 unit is suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Applications

- Welding processes

## Features

- Built-in silencer
- Steel working surface with integrated extraction aluminium grate
- Built-in filter cleaning system
- Flexible design
- Delivered with extraction arm
- Built-in air compressor (option)

## Restrictions

- Not suitable for thermal metal cutting applications
- Not suitable for operation in the presence of explosive dust or aerosols or aggressive vapors and gases

## Technical characteristics

Bearing capacity, kg	Height of the table surface, mm	Max airflow, m <sup>3</sup> /h	Power consumption (380V), kW	Built-in fan type	Filter surface (depends on cartridge type), m <sup>2</sup>	Noise level, dB	Weight, kg
100	815	1200	1,7	VM-p2500	12/10	70	200

## Article numbers






Article №	Model	Cartridge type
Without air compressor		
27869	WT-CCB-1200-T10	Tcart-10
27863	WT-CCB-1200-T12	Tcart-12
With built-in air compressor		
27873	WT-CCB-1200-K-T12	Tcart-12

## Delivery set / Standard kit info


- Built-in fan
- Filter cartridge of respective type
- Extraction arm
- Oil and moisture separator with reducer for compressed air



## Accessories

	Article №	Model	Description
	6382	sOZM	Metal protection screen. Consists of rear and two side screens, made of steel. Side screens are detachable.
	6383	sOZG	Flexible protection screen. Consists of a light frame made of square metal profile with vertically hanging green protective stripes. Protective stripes absorb hazardous radiation and are resistant to welding splashes and sparks.
	6380	sOR-OZ	Lights for protection screen. Lamp and fastening for securing on the protective shielding.
	6294	sSP	Turntable for small parts handling. Diameter - 300mm. Table base - 300x300mm, with a clamp for grounding wire.
	10089	sDNMP100	Differential gauge
	6058	sKR sDNMP100	Mounting bracket for differential gauge

## Spare filter elements

	Article №	Model	Description
	6908	Tcart-10	Spare filter cartridge, 10 m <sup>2</sup> , PTFE
	6903	Tcart-12	Spare filter cartridge, 12m <sup>2</sup> , PTFE



# WT-CCM-1200 Welding table



## Description

WT-CCM-1200 is a complete welding working station that effectively captures and filters the welding fumes generated during welding operations. WT-CCM-1200 is designed for fumes extraction during MIG/MAG welding processes or inert gas welding with consumable electrodes. Unit is equipped with built-in filter cleaning system that requires connection to external compressed air supply. WT-CCM-1200 unit is suitable for continuous indoor operation under the following environmental conditions: ambient temperature from +10 to +45 °C and relative humidity of 80% at 25 °C.

## Applications

- Welding processes

## Features

- Built-in silencer
- Steel working surface with integrated extraction aluminium grate
- Built-in filter cleaning system
- Openable side screens, large parts handling
- Equipped with turntable for small parts
- Compatible with different types of filter cartridges

## Restrictions

- Not suitable for thermal metal cutting applications
- Not suitable for operation in the presence of explosive dust or aerosols or aggressive vapors and gases

## Technical characteristics

Weight allowance, kg	Height of the table surface, mm	Max airflow, m <sup>3</sup> /h	Power consumption (380V), kW	Built-in fan type	Filter surface (depends on cartridge type), m <sup>2</sup>	Noise level, dB	Weight, kg
100	815	1200	1,2	VM-p2500	12/10	70	200

## Article numbers

Article №	Model	Cartridge type
27849	WT-CCM-1200-T10	Tcart-10
27843	WT-CCM-1200-T12	Tcart-12


## Delivery set / Standard kit info

- Built-in fan
- Filter cartridge of respective type
- Extraction arm
- Steel back and side protective screens
- Turntable for small parts
- Oil and moisture separator with reducer for compressed air



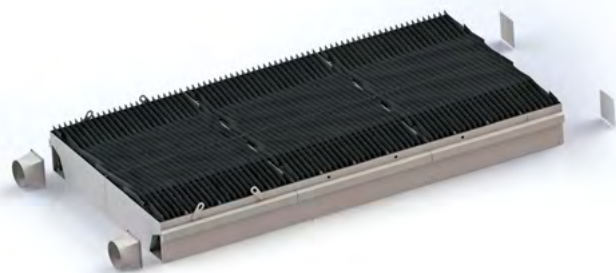


## Spare filter elements

	Article №	Model	Description
	6908	Tcart-10	Spare filter cartridge, 10 m <sup>2</sup> , PTFE
	6903	Tcart-12	Spare filter cartridge, 12m <sup>2</sup> , PTFE



# CCT Modular extraction table



## Description

Modular CCT table is designed for fumes and combustion products extraction during thermal cutting of metal sheets. CCT is suitable for plasma, laser, gas and other types of thermal cutting applications. The table has modular design and consists of standard CCT-modules. Range of CCT-modules includes the ones with different length and width, thus providing the possibility to build a table of required size. Filter unit and extraction fan are required for operation and must be ordered separately. Their types depend on the table size and parameters of cutting applications.

## Industries and applications

- All types of metal thermal cutting (plasma, laser, gas. etc)

## Features

- Modular design, flexible solution
- Reliable pneumatic components
- Reduced airflow capacity required
- Easy installation

## Restrictions

- Not suitable for operation in presence of explosive or combustible materials in the air
- Not suitable for extraction of aggressive vapors and gases

## Article numbers/Technical characteristics

Article №	Model	Rec. airflow, m <sup>3</sup> /h	Dim. of metal sheet, LxW, m	Max. allowed load, kg	Connection diameter, mm	Weight, kg
5343	CCT 15 x 20	3600	2 x 1,5	Standard – 1010 Reinforced – 1620	400	630
5357	CCT 15 x 15	3600	1,5 x 1,5			480
5358	CCT 20 x 15	4800	1,5 x 2			610
5344	CCT 20 x 20	4800	2 x 2			790

## Article numbers

Article №	Model	Description
5345	sKS	Connection kit for CCT modules. Required number of sKS kits is less than total number of CCT modules by 1.
5346	sKM	Installation kit for CCT table. One sKM kit is required for each row of the CCT modules.

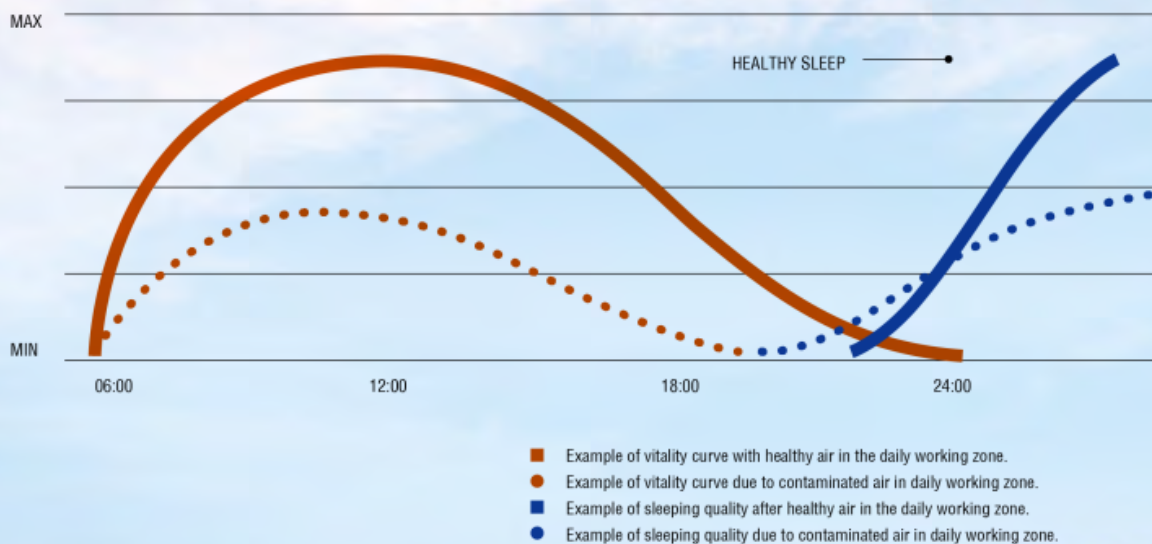




# Productivity and healthy sleep

Research shows:

One of the most important aspects of our health and working environment is the quality of the air that we breathe. Better air helps us recharge by a healthy sleep.



Estimates based on recent research.

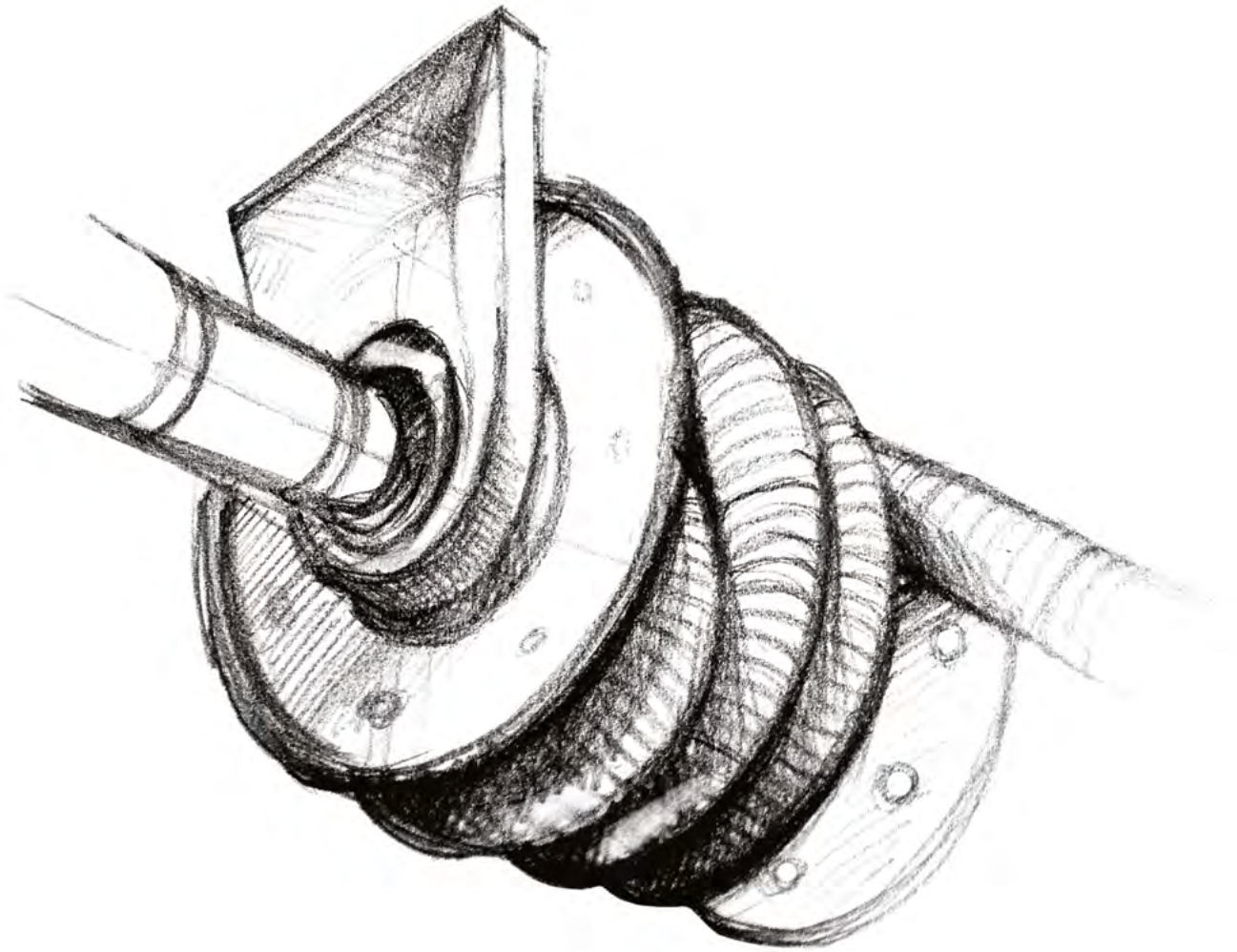
Estimate from other research indicates that increased productivity due to an improved indoor climate is 10-100 times greater than operation and maintenance costs.





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# Vehicle Exhaust









# PRODUCT GUIDE



## ARS

Spring driven, retractable exhaust reel for exhaust extraction in garages and service workshops. Robust and reliable design, virtually maintenance free. Pulled up/down manually.



## ARM

Motorized exhaust reel for truck depots and service stations. Hose is pulled up/down at a click of a button. Ideal for high ceilings.



## ARSL

Rail extraction system for emergency service and transports. Special design gives automatic disconnection on vehicle departure. Designed according to special safety and quick handling requirements of emergency services.



## ARST

Straight rail exhaust extraction system for service stations, garages, repair and production workshops. Flexible-easy to change layout. Can be equipped with different nozzles. Suitable for vehicles with two exhausts.



## ARL LOOP

Loop rail exhaust extraction system for inspection stations, automotive production and service facilities. Carriages, hoses and nozzles follows the vehicle through the system. When ready it automatically returns to the start.



## Vehicle exhaust accessories

Get familiar with our large selection of accessories like; turning consoles, different hoses, splitters and a range of extraction nozzles for different kinds of vehicles and applications.

# ARS Retractable Exhaust Reel

• • • • • Spring driven



## Description

An easy and efficient solution for removing the exhaust fumes from garages or any stationary workplace. When the reel isn't in use, the hose and nozzle are safely stored away, offering a free and clean work area. The reliable spring mechanism of the ARS, ensures a long and trouble free use with a low cost of ownership. The reel is easily installed direct on the wall, ceiling or on a swing arm to increase the working area. The ARS hose reel either operates as a stand-alone unit with its own pre-selected fan or is connected to a centralized ventilation system.

## Industries and applications

SovPlym ARS exhaust reels are used in various transport and industrial facilities that require extraction of exhaust fumes and gases:

- Car repairing shops
- Service stations
- Inspection posts
- Transport depots
- Garages
- Military vehicle depots

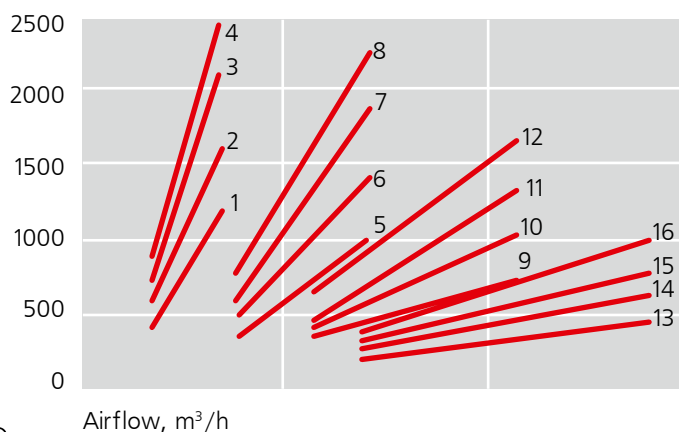
## Features

- Big reach area
- Long service life
- No additional space required
- Easy installation
- Robust and reliable design
- Wide selection of hoses and nozzles

## Delivery package

Hose and extraction nozzle are not included into standard delivery package and should be ordered separately.

## Pressure drop diagram



- |                 |                  |
|-----------------|------------------|
| 1. ARS-75-5     | 10. ARS-125-7,5  |
| 2. ARS-75-7,5   | 11. ARS-125-10   |
| 3. ARS-75-10    | 12. ARS-125-12,5 |
| 4. ARS-75-12,5  | 13. ARS-150-5    |
| 5. ARS-100-5    | 14. ARS-150-7,5  |
| 6. ARS-100-7,5  | 15. ARS-150-10   |
| 7. ARS-100-10   | 16. ARS-150-12,5 |
| 8. ARS-100-12,5 |                  |
| 9. ARS-125-5    |                  |



## Article numbers / Specifications

Article №	Model	Exhaust hose		L, mm	l, mm	B, mm	Recommended airflow, m <sup>3</sup> /h	Weight, (w/o hose) kg
		Diametr, mm	Length, m					
5650	ARS-75-5	75	5	764	602	600	270	60,8
5650	ARS-75-7,5	75	7,5				270	60,8
5651	ARS-75-10	75	10	914	752	750	270	62,4
5651	ARS-72-12,5	75	12,5				270	62,4
5652	ARS-100-5	100	5	764	602	600	540	60,8
5652	ARS-100-7,5	100	7,5				540	60,8
5653	ARS-100-10	100	10	914	752	750	540	60,8
5654	ARS-100-12,5	100	12,5	1064	902	900	540	67,2
5655	ARS-125-5	125	5	764	602	600	810	60,8
5656	ARS-125-7,5	125	7,5				810	60,8
5657	ARS-125-10	125	10	1064	902	900	810	67,2
5658	ARS-125-12,5	125	12,5	1264	1102	1100	810	70,4
5659	ARS-150-5	150	5	914	752	750	1080	60,8
5659	ARS-150-7,5	150	7,5				1080	60,8
5660	ARS-150-10	150	10	1064	902	900	1080	67,2
5661	ARS-150-12,5	150	12,5	1264	1102	1100	1080	70,4





# ARM Retractable Exhaust Reel

● ● ● ● ● ● ● ● Motor driven



## Description

ARM reel is the most efficient solution for truck, bus and vehicle repair boxes, or any other garage or industrial facility with high ceilings. With a click of a button an electric motor reels the hose and nozzle, to the exact position where the operator needs it. This is one of our best sellers! It brings a tidy and well organized workshop, with the hose and nozzle safely stored, when not in use. ARM exhaust reel is installed on the wall, ceiling or on a swing arm to get the maximum reach area. The ARM either operates as a stand-alone unit equipped with its own pre-selected fan or connected to a centralized ventilation system.

## Industries and applications

SovPlym ARM exhaust reels are used in various transport and industrial facilities that require extraction of exhaust fumes and gases:

- Engines production
- Engines testing facilities
- Car repairing shops
- Service stations
- Inspection posts
- Transport depots
- Garages
- Military vehicle depots

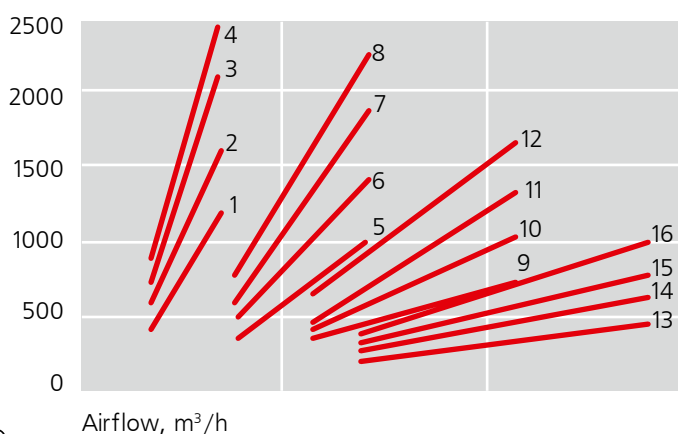
## Delivery package

Hose and extraction nozzle are not included into standard delivery package and should be ordered separately.

## Features

- Big reach area
- Automatic reel
- No additional space required
- Easy installation
- Robust and reliable design
- Wide selection of hoses and nozzles

## Pressure drop diagram



- |                    |                     |
|--------------------|---------------------|
| 1. ARM(F)-75-5     | 10. ARM(F)-125-7,5  |
| 2. ARM(F)-75-7,5   | 11. ARM(F)-125-10   |
| 3. ARM(F)-75-10    | 12. ARM(F)-125-12,5 |
| 4. ARM(F)-75-12,5  | 13. ARM(F)-150-5    |
| 5. ARM(F)-100-5    | 14. ARM(F)-150-7,5  |
| 6. ARM(F)-100-7,5  | 15. ARM(F)-150-10   |
| 7. ARM(F)-100-10   | 16. ARM(F)-150-12,5 |
| 8. ARM(F)-100-12,5 |                     |
| 9. ARM(F)-125-5    |                     |

## Article numbers / Specifications

Article № ARM/ARMF	Model	Exhaust hose		L, mm	l, mm	B, mm	Recommended airflow, m³/h	Weight, (w/o hose) kg	
		Diametr, mm	Length, m					ARM	ARMF
6675/5674	ARM/ARMF-75-5	75	5,0	970	796	880	270	53,5	67,5
6675/5676	ARM/ARMF-75-12,5	75	12,5	970	796	880	270	61	75
6676/5676	ARM/ARMF-100-5	100	5	970	796	880	370	55	69
6676/5676	ARM/ARMF-100-10	100	10	970	796	880	370	62,5	76,5
6677/5678	ARM/ARMF-100-12,5	100	12,5	1120	946	1030	370	68	82
6678/5679	ARM/ARMF-125-5	125	5	970	796	880	600	57,5	71,5
6678/5679	ARM/ARMF-150-7,5	125	7,5	970	796	880	600	63	77
6679/5681	ARM/ARMF-125-10	125	10	1120	946	130	600	69	83
6680/5682	ARM/ARMF-125-12,5	125	12,5	1220	1146	1230	600	69	83
6681/5683	ARM/ARMF-150-5	150	5	970	796	880	800	72	86
6681/5683	ARM/ARMF-150-7,5	150	7,5	970	796	880	800	59	73
6682/5684	ARM/ARMF-150-10	150	10	1120	946	1030	800	65	79
6683/5685	ARM/ARMF-150-12,5	150	12,5	1220	1146	1230	800	78	92
6105/5155	ARM/ARMF-200-10	200	10	1380	1202	1200	1200		
6105/5155	ARM/ARMF-200-12,5	200	12,5	1380	1202	1200	1200		





# ARSL Exhaust removal system

For Fire and Rescue stations



## Description

ARSL is a reliable, fully automatic exhaust extraction system, designed for functionality and efficiency. It is safe, user-friendly and will improve the daily work for your fire fighters and emergency personnel. It is especially designed for fire- and rescue stations, with stand-by vehicles, ready to leave at any moment. The system consists of an aluminum track, equipped with a sliding balancer, and a self-detachable pneumatic ESQ nozzle that automatically releases from the exhaust pipe at the end of the track when the vehicle departs. ESQ nozzles are best suited for vehicles with the exhaust pipe located at the rear or the bottom sides. Delivery package of the ESRL system, includes all components normally needed for the mounting and installation. Fans, controls and automatic on/off systems are not included and should be ordered separately.

## Industries and applications

- Fire stations
- Emergency stations

## Features

- Free car movement
- Automatic nozzle disconnection
- No additional space required
- Easy installation
- Automatic start/stop by pressure sensor (option)
- 100% vehicle exhaust extraction





## Technical characteristics

<b>Rail lenght</b>	6; 9 m
<b>Exhaust hose diameter</b>	100; 125; 150 mm
<b>Exhaust hose lenght</b>	6; 10 m
<b>Max T of exhaust</b>	150 °C
<b>Diameter of pneumatic exhaust nozzle</b>	180 mm
<b>Exhaust pipe diameter</b>	60-170 mm
<b>Rail mounting height</b>	
• Min	3,5 m
• Max	5,0 m
<b>Diameter of the adapter for connection to ventilation system</b>	100; 125; 150 mm
<b>Compressed air pipe diameter</b>	8 mm
<b>Compressed air pressure</b>	
• Min	1 atm
• Max	6 atm
<b>Weight</b>	
• ARSL-6	42 kg
• ARSL-9	49 kg

## Installation options



Wall (horizontal)  
mounting



Ceiling (vertical)  
mounting





# ARST Exhaust removal system

..... For garages and service depots



## Description

ARST straight-rail exhaust extraction system is a most popular and effective solution for garages, transport depots and other facilities where vehicles have to move along straight path of a certain length in closed premises. ARST system is also an ideal solution for service stations where extraction from multiple stationary service posts arranged in a row is required. Exhaust extraction system must be connected to an appropriate fan or suitable central extraction system.

Delivery package includes extraction rail with all mountings and fittings required for installation.

## Industries and applications

- Garages
- Control lines
- Car maintenance stations
- Engine testing sites
- Car production lines
- Trucks inspection areas

## Features

- Modular design
- Suitable for cars with two exhaust pipes
- No additional space required
- Easy installation
- Flexible solution, layout can be changed easily
- 100% vehicle exhaust extraction





## Installation options

Wall or column (horizontal) mounting



Ceiling (vertical) mounting



## Delivery package

### Included into the package:

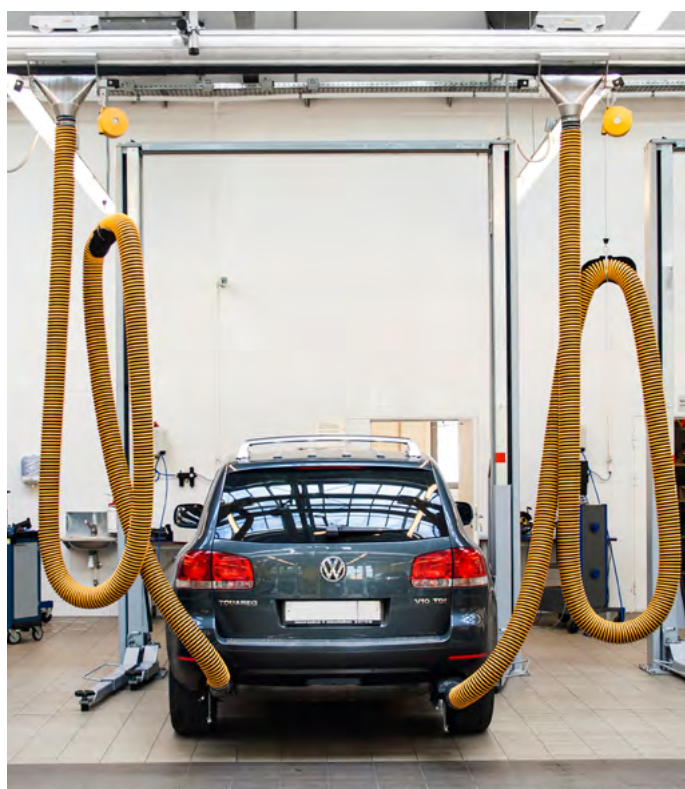
- Rail track with rubber lips

### To be specified and ordered:

- Carriage
- Exhaust hose
- Exhaust nozzle
- Balancer

ARST rail extraction system consists of 5 main elements of which only rail track is included into the package. It is a flexible engineering solution therefore such its components as carriages, balancers, exhaust hoses and nozzles must be selected according to the certain application and be ordered separately. Standard delivery package includes only the extraction rail of respective length with all mountings and fittings that are required for proper installation. Mounting kit is universal and suitable for both vertical (ceiling mounting) and horizontal (wall or column mounting) installation.

Article №	5390	5391	5392	5393	5394	5395	5396	5397	5398
Length, m	5.8	8.7	11.6	14.5	17.4	20.3	23.2	26.1	29.0





# ARL LOOP Exhaust removal system

For repair shops, inspection areas  
and production facilities



## Description

ARL LOOP exhaust extraction system is the most flexible and universal solution for removal of exhaust gases directly from the source of emission that allows free movement of the vehicle inside the repair shop, garage or production workshop. ARL LOOP system allows you to work with multiple vehicles simultaneously, while carriages follow their straight path from entry point of the area to its exit. When vehicle is ready to leave – just disconnect the nozzle and the carriage will automatically return by the loop and return rail to the beginning of the system ready to work with next arrived vehicle. ARL LOOP extraction system must be connected to an appropriate fan or suitable central extraction system.

Delivery package includes extraction rail with all mountings and fittings required for installation.

## Industries and applications

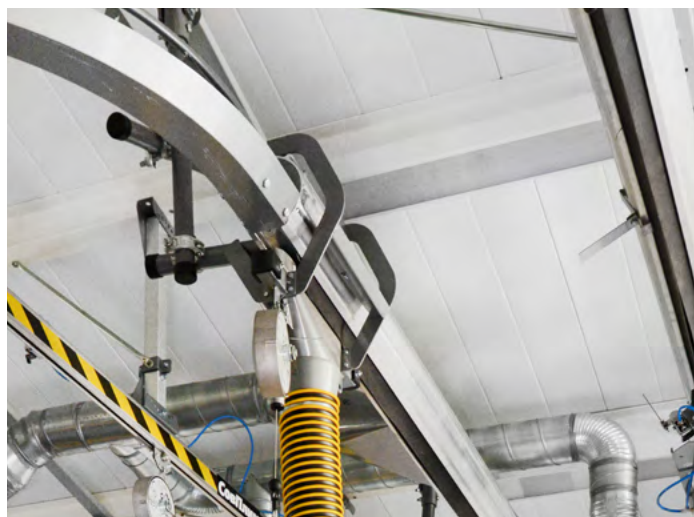
- Garages
- Inspection areas
- Car maintenance stations
- Engine testing sites
- Car production lines
- Service depots

## Features

- Modular design
- Automatic return of the carriage
- No additional space required
- Easy installation
- Allows to serve multiple moving vehicles
- 100% vehicle exhaust extraction







## Delivery package

### Included into the package:

- Rail track with rubber lips

### To be specified and ordered:

- Loop track
- Return track
- Exhaust hose
- Exhaust nozzle
- Balancer
- Carriage

### Special order:

- Carriage carousel
- Refilling station
- Carriage tank

ARL LOOP rail extraction system consists of 7 main elements of which only rail track is included into the package. It is a flexible engineering solution therefore such components of it as carriages, balancers, exhaust hoses and nozzles must be selected according to the certain application and be ordered separately. Standard delivery package includes only the set of extraction rails of respective length with all mountings and fittings that are required for proper installation. Standard distance between the rail track and return rail is 2100 mm, if other distance or non-standard length of rails is required then additional items should be ordered.

Article №	5430	5431	5432	5433	5434	5435	5436	5437	5438	5439	5440	5441	5441
Length, m	23,2	21,6	29	31,9	34,8	37,7	40,6	43,5	46,4	49,3	52,2	55,1	58



# Accessories for exhaust extraction systems

## SSa Swing console



### Description

Use the robust SSa turning console to greatly increase reach area of your exhaust extraction reel. Solution to the industrial areas and workshops where standard reel mountings are impossible.

Consisting of turning bar and mounting plate the SSa console can rotate 180° and provide unmatched support and stable positioning for the exhaust extraction reel.

Range of available SSa consoles include models of lengths from 1,5 m to 4,5 m and of weight allowances from 20 kg to 60 kg.

SSa turning console can be attached to the wall or mounted onto support column.

## iDrop Hanging extraction unit



### Description

The compact iDrop unit is a good solution for small workshops and repair boxes with stationary working places. Consisting of the nozzle and extraction hose supported by balancer it allows to pull out and lock the needed length of the hose. When the work is finished and nozzle is disconnected from the vehicle, a quick pull of the hose will unlock the balancer and return the hose to it's start position.

Installation options include the wall, ceiling, column, or console mountings. iDrop must be connected to an appropriate ventilation system or directly to a suitable industrial fan.

iDrop unit supports hoses with diameters from 75 to 125 mm and lengths up to 7,5 m.



# Vega Swing extraction unit



## Description

To reach the most distant places of your workshop use the Vega console that will allow to increase the reach area of your exhaust extraction system by up to 7 m.

Vega unit consists of swing mechanism, mounting plate with stoppers, extraction hose with balancer support and exhaust nozzle. Robust and easy to handle turning mechanism ensures easy and secure positioning.

Similar to IDrop, the balance block allows to pull out the required length of hose and lock it, then retract it back when it is not in use, preventing the nozzle lying on the floor where it could be damaged by passing vehicles.

Usually Vega extraction units are connected directly to a separate industrial fan but also a connection to a centralized ventilation system is possible.

Supported diameters of hoses for Vega unit are 75 mm and 100 mm.

# Hose splitters and connections



## Description

Use the hose splitters to service vehicles with two exhaust pipes. SovPlym offers several types of connectors including quick connection splitters and nipples.

Product range of hose splitters include parts for all standard hose diameters (75, 100, 125, 150 mm) that fit all standard types of extraction hoses. Be aware that all nipples and connection pieces should be ordered separately from hose splitters to ensure the convenient use and safety of the whole system.

## SP-HOSE-150 Exhaust gas hose



### Description

Exhaust gas hose for exhaust fumes/gases up to +150 °C.

### Material

Spiral: plastic-profile helix.

Wall: EPDM/PP-coated polyester fabric.

### Features

- Good flow characteristics
- Super lightweight
- Withstands high mechanical loads
- Excellent recovery properties

## SP-HOSE-200 Exhaust gas hose



### Description

Exhaust gas hose for exhaust fumes/gases up to +200 °C.

### Material

Clamp profile spiral: hot-dip galvanised steel with additional plastic profile.

Wall: neoprene-coated polyester fabric.

### Features

- Highly flexible
- Vibration-proof
- Extremely compressible to approx. 1:5
- Extremely lightweight

## SP-HOSE-300 Exhaust gas hose



### Description

Exhaust gas hose for exhaust fumes/gases up to +300 °C.

### Material

Clamp profile spiral: hot-dip galvanised steel with additional plastic profile.

Wall: special-coated inflammable textile.

### Features

- Hardly inflammable robust
- Highly flexible
- Vibration-proof
- Abrasion-resistant to diesel exhaust fumes

# Exhaust nozzles

## IGripST



### Description

Steel extraction nozzle suitable for exhaust gazes of high temperatures, up to 650 °C. Made of 2 mm steel, the nozzle has a spring-loaded rubber flap to prevent the suction when nozzle is not attached to the vehicle exhaust pipe. IGripST has a special 20 mm inspection hole for testing and inspection purposes. Available for hoses Ø75-150 mm. Fits exhaust pipes up to Ø185 mm.

## IGrip



### Description

Conical rubber extraction nozzle for hoses 100 and 125 mm. Suitable for vehicles and light trucks with exhaust pipes from 50 to 140 mm. Rubber material prevents any possible damage to wheels and paintwork vehicles during operation. Oval shape of the nozzle allows easy connection to any oval types of exhaust pipes. Can be equipped with lockable clamp.

## IGripR (G)



### Description

Rubber extraction nozzle for rail systems for moving vehicles. Equipped with robust lockable mechanized clamp that fix the nozzle on the exhaust pipe. The clamp is adjustable and strength of connection can vary. Available for hoses 100 and 125 mm. Fits exhaust pipes 50-140 mm.

## IGripSK



### Description

Steel extraction nozzle for vertical exhaust pipes, primarily for truck vehicles. The IGripSK equipped with adapter with telescopic tube to facilitate the positioning of the nozzle on the exhaust pipe. Length of the telescopic tube varies from 2 m to 3 m. Available for hoses 125 and 150 mm. Fits exhaust pipes up to 235 mm.

Consult your local distributor for more information on other nozzles.

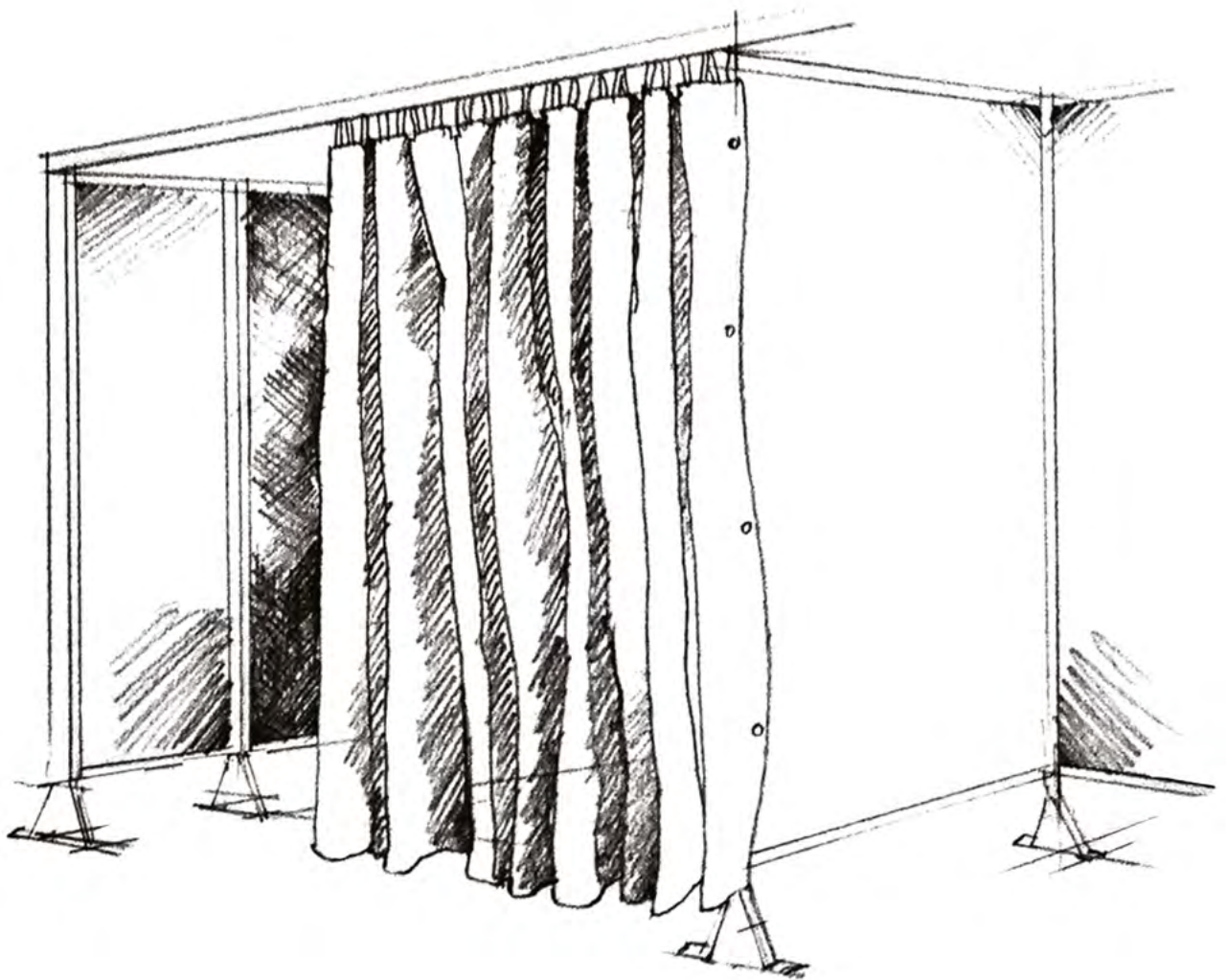




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# Workplace

Flexible protection against Noise, Light and Draft









# Protection screens and noise reduction panels



## Description

Welding and grinding processes are among the noisiest operations in industrial production. SovPlym has developed special workplace solutions based on noise reduction panels and different types of protection screens. A flexible system constructions that is easy to install. SovPlym protection screens and noise reduction panels provide effective shielding for personnel exposed to noise and light from various production processes and can be used for effective space management by separating conflicting working tasks.

## Applications

SovPlym protective screens and booths are suitable for various types of applications and help to handle the following issues:

- UV light emissions
- Noise
- Absence of separation between conflicting tasks
- High temperatures
- Sparks and sprays

## Features

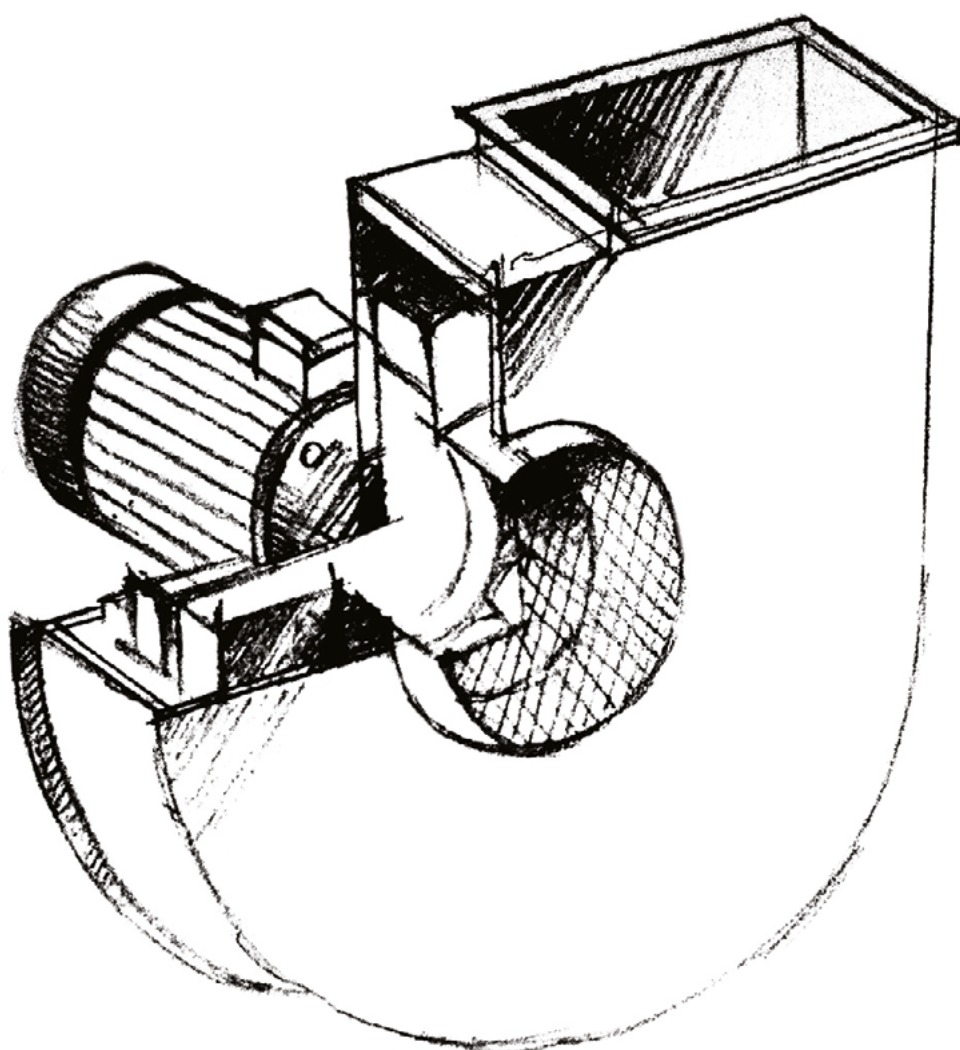
- Can replace expensive permanent walls
- Quick and easy installation
- Great flexibility
- Increased level of protection





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# Stainless steel products







# Stainless Steel Products



## Description

In response to growing demands of its customers, SovPlym has developed a range of products made of stainless steel. These units are resistant to aggressive environments can handle different types of corrosive dusts and gases and are more resistant to abrasive types of materials. SovPlym stainless steel products are also suitable for applications with strict hygienic and cleanroom requirements. The range of SovPlym stainless steel products includes fans, mobile filter units and different types of extraction arms.

## Industries and applications

SovPlym stainless steel products are suitable for various types of applications:

- Chemical industry
- Pharmaceutical industry
- Production of construction materials
- Food industry

## Features

- High abrasion resistance
- Resistance to aggressive environments
- Robust design
- Wide range of units available
- Conformity to hygienic standards
- High energy-efficiency





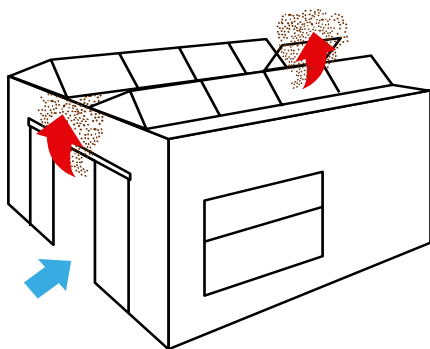


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# Appendix

- Methods of process ventilation
- Calculate your savings
- How to design your system

# Methods of process ventilation

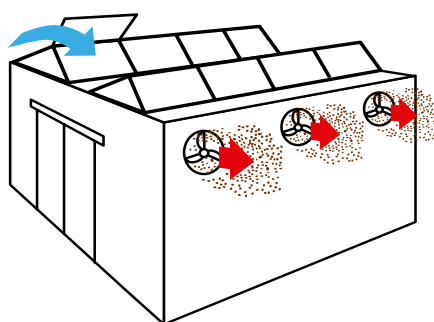


## 1. NATURAL VENTILATION

**Method:** doors and windows open.

**Advantages:** zero investment cost.

**Disadvantages:** does not solve problems of fumes and dust. People and machines still exposed to toxic and damaging pollutants. High heat cost in cold climate.



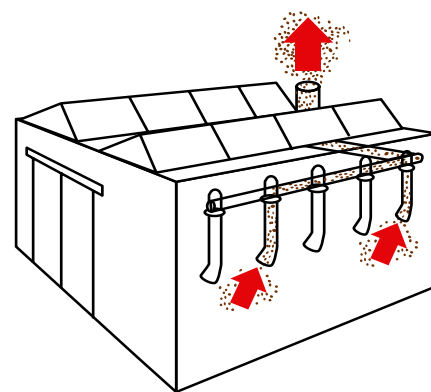
## 2. GENERAL VENTILATION WITH CEILING OR WALL MOUNTED FANS

**Method:** high volume of air extracted.

A welding workshop must have between 3 and 15 air changes per hour in order for this method to be effective.

**Advantages:** low investment cost.

**Disadvantages:** people on the premises still inhale toxic fumes. Enormous heat loss.

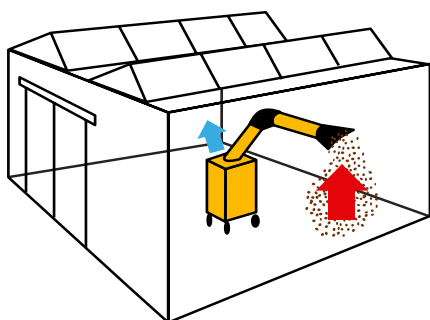


## 3. WALL MOUNTED, FLEXIBLE FUME EXTRACTORS

**Method:** pollutants are extracted of source and are not spread through-out the workshop.

**Advantages:** very efficient. Concentrated pollutants are extracted at source. Small air volumes extracted and optional energy saving equipment available.

**Disadvantages:** extraction hood must be positioned 25-50 cm from source. Difficult to mount in very large production areas where walls or stanchions are not close to the operation.

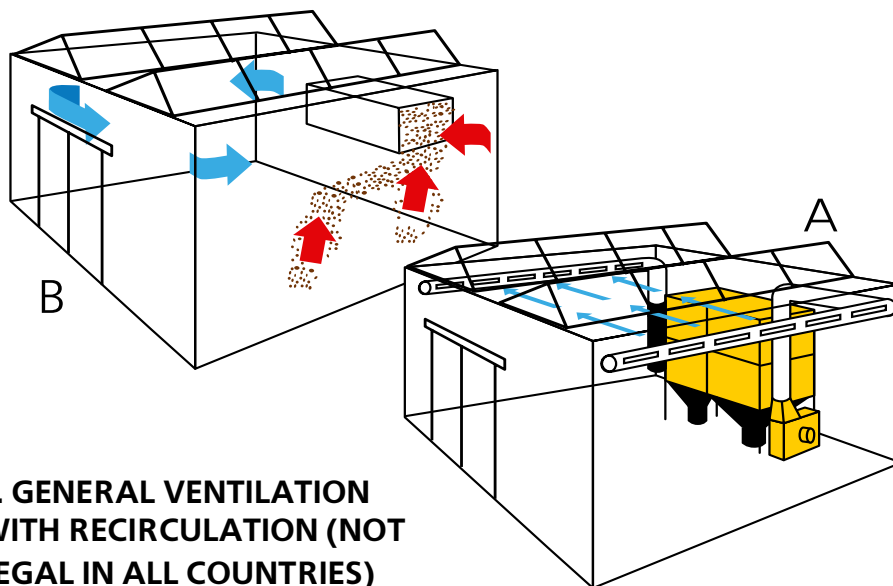


## 4. MOBILE FUME EXTRACTOR WITH BUILT-IN FILTER

**Method:** extraction at source. Can be moved to different locations.

**Advantages:** very efficient. Saves energy as the air is cleaned and recirculated in the workshop. No mounting required. Quick and easy to move.

**Disadvantages:** filtration cartridges need to be either cleaned or replaced after a period of use.



## 5. GENERAL VENTILATION WITH RECIRCULATION (NOT LEGAL IN ALL COUNTRIES)

**Method:** high volume of air treated. In welding workshops the total air volume should be filtered between 3 -15 times per hour. 100% of the air is cleaned and in countries where this is allowed recirculated.

**Advantages:** operators do not have to position extraction hoods. Reduces heat loss.

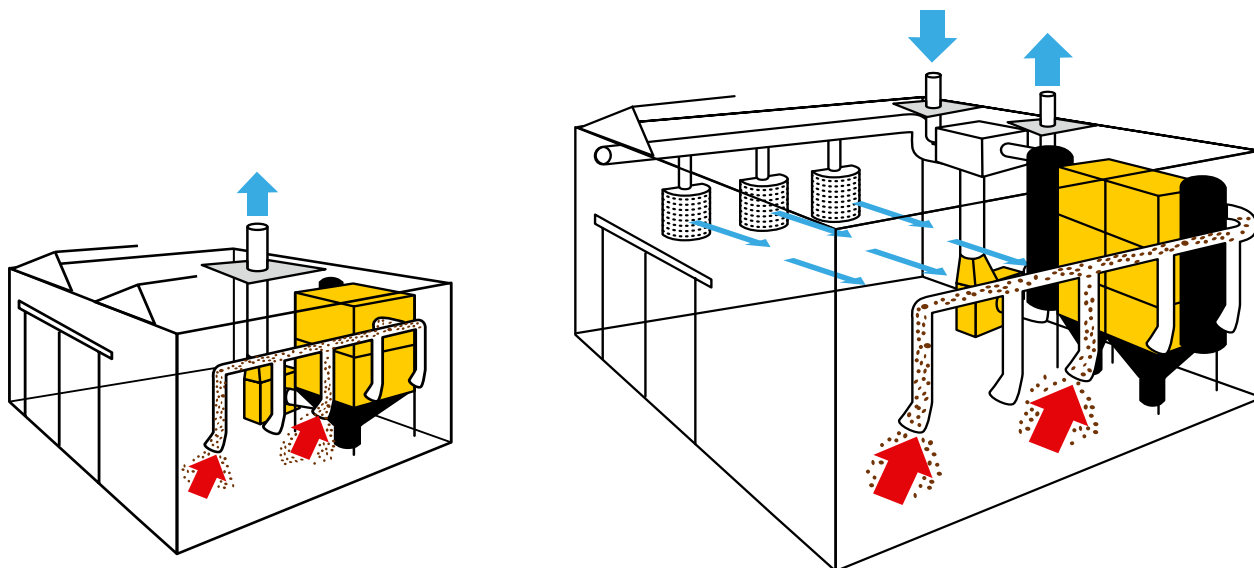
**Disadvantages:** no extraction at source. People on the premises inhale toxic fume before it is captured. Special filters required when gases are present. All filters must be maintained.

**Two general techniques:**

**A)** Push-Pull system, that brings the polluted air in one direction to be extracted and then filtered.

**B)** free-hanging electrostatic filter.

In both cases, for premises where dust and particles cannot be extracted at source, this general filtration of the total air volume is a conceivable solution. The total air volume should be filtered 3-15 times per hour and the cleaned air may either be let out of the premises or recirculated (if legal).



## 6. WALL MOUNTED, FLEXIBLE FUME EXTRACTORS WITH FILTRATION.

**Method:** extraction direct at source. Central system with air filtration.

**Advantages:** very efficient. Pollutants captured before they spread throughout workshop. Saves energy and minimize your ecologic footprint.

**Disadvantages:** hood must be positioned by operator. Filters must be washed or replaced. Special filters required when gases are present.

## 7. AT SOURCE FUME EXTRACTORS, GENERAL VENTILATION EXHAUST, DEMAND CONTROLLED AIR VOLUMES, PROCESS FILTRATION AND HEAT EXCHANGER

**Method:** extraction at source combined with filter and heat exchanger. All pollutants are captured, filtered and the energy from

exhausted air is exchanged back through a heat exchanger system.

**Advantages:** state of art solution. Very efficient with a combination of at source capture and general exhaust ventilation. Demand controlled air volumes save energy. Dangerous gases or vapors are taken care of. Fresh air supply through the heat exchanger and general ventilation system at low cost.

**Disadvantages:** hood must be positioned by the operator. Filters must be cleaned.

# Calculate your savings!

## BY USING AT SOURCE EXTRACTORS FOR WELDING FUMES

In the table below you can easily compare the air volume ( $\text{m}^3/\text{h}$ ) that needs to be extracted, due to the setup of the ventilation equipment. Depending on your actual cost for heating/cooling the air volume you need extract from your workshop, you transfer  $\text{m}^3/\text{h}$  into how much money you are saving for each step you improve your ventilation system.

**A pay-off time in a few years is normal. And on top of this you reduce maintenance costs, increase productivity and get less sick leave.**

Conditions		Number of welders	No.	2	5	10	20
		Workshop area $\text{m}^2$ (height 4.5 m)	$\text{m}^2$	100	1000	1500	2000
Air Changes	A	General ventilation without at source fume extractors ( $50 \text{ m}^3/\text{h} \times \text{workshop area } \text{m}^2$ )	$\text{m}^3/\text{h}$	5000	50000	75000	100000
Savings with fume extractors $\text{m}^3/\text{h}$		No. of welders with fume extractor $\times 1000 \text{ m}^3/\text{h}$ + general ventilation $5 \text{ m}^3/\text{h} \times \text{workshop area } \text{m}^2$	$\text{m}^3/\text{h}$	2500	10000	17500	30000
	B	Saving in heated and cooled air compared to A	$\text{m}^3/\text{h}$	2500	40000	57500	70000
Savings with fume extractors and Energy Controls EC		Using fume extractors with Energy Controls and a total arc time (direct welding time) of 10%. No. of welders $\times 0,1 \times 1000 \text{ m}^3/\text{h} \times \text{workshop area } \text{m}^2$	$\text{m}^3/\text{h}$	700	5500	8500	12000
		Saving in heated and cooled air compared to B	$\text{m}^3/\text{h}$	1800	4500	9000	18000
	C	Saving in heated and cooled air compared to A	$\text{m}^3/\text{h}$	4300	44500	66500	88000
Savings with fume extractors, Automatic Dampers, Frequency Converter and Heat Exchanger system	D	Additional saving with 50–90%, compared to C, can be achieved by using frequency converter and a heat exchanger system. SovPlym can help you to achieve these savings now.					



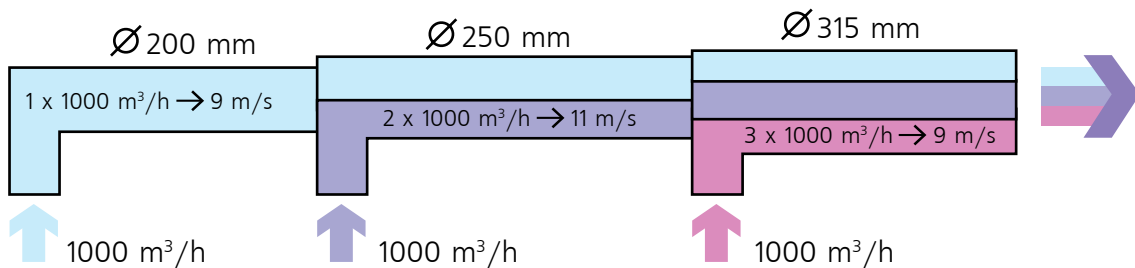
# Quick & Easy: How to calculate your system

## PRESSURE DROP AND HOW TO CALCULATE IT.

Pressure loss is the biggest enemy in all ventilation systems. For you to understand where pressure loss occurs and how to minimize the effects of it in your ventilation system, these pages offer you a simple form how to calculate it. If the pressure drop in your ducting system is too high, no fume extractor will be efficient.

## WHAT IS PRESSURE DROP?

The air resistance in a duct system is mainly determined by the velocity of the air in that system. As the velocity increases, the resistance increases accordingly. This is in fact what we call pressure drop. The "static pressure" of a fan indicates the volume of air that the fan can extract, giving a certain pressure drop. The higher the pressure drop is, the less air the fan will be capable to extract.



The above diagram shows how the pressure loss (resistance) can be kept down by increasing the diameter of the duct so you will achieve an even velocity throughout the whole system. Note! When extracting fumes and dust you must maintain a relatively high velocity of the air to avoid the dust and particles from settling in the duct system. Recommended air velocity is 9-15 m/sec.

## HOW TO CALCULATE THE PRESSURE DROP?

Pressure is measured in Pascal (Pa). In order to calculate how many Pa you get in a certain duct, you must first know how much air is passing through that duct. Air volume is measured in m³/h (cubic meters per hour) or l/s (liters per second). The following pages gives you an overview how to design and tables how to calculate.

**On internet you will find instant tools, where you just fill in your data, to calculate pressure loss.**

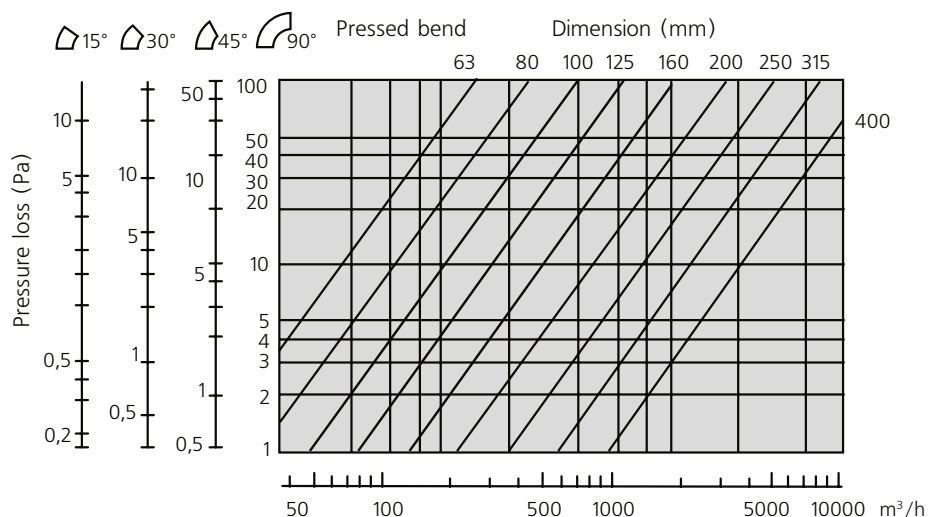
### Conversion factors:

1 m³/h 0,28 l/s

### Recommended values:

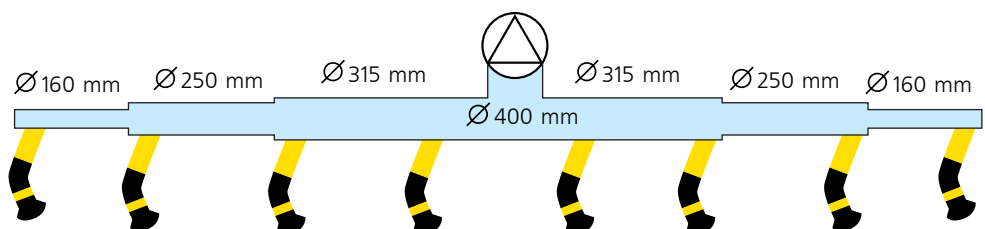
Air velocity in ducting: 10-15 m/s

Air volume per fume extraction: 1000 m³/h



## BEST PRACTICE!

In larger systems it is a good idea to position the fan in the middle of the system. This gives several advantages — on one hand a lower pressure loss and on the other you can use smaller dimensioned ducting.



# THE PRESSURE LOSS CALCULATION

Duct diam. in mm	1000 m³/h		2000 m³/h		3000 m³/h		4000 m³/h		5000 m³/h		6000 m³/h		7000 m³/h		8000 m³/h		9000 m³/h		10000 m³/h	
	Pa	m/s	Pa	m/s	Pa	m/s	Pa	m/s	Pa	m/s	Pa	m/s	Pa	m/s	Pa	m/s	Pa	m/s	Pa	m/s
Ø 160	18	13	60	26																
Ø 200	5	9	20	18	45	26	75	35												
Ø 250	2	5,5	6	11	14	17	22	22	40	28	50	34	70	39						
Ø 315			2	6,5	3	9	6	13	9	16	11	19	17	22	22	26	27	28	32	32
Ø 400					1	7	2	9	3	11	5	12	6	15	8	17	10	18	12	22
Ø 500							1	6	1	7	2	8	2	10	3	11	3	13	4	14

Table shows pressure loss in Pa per m. ducting with air velocity in m/s at different air volumes and different ducting dimensions.

## Step by step example:

- Start by making a simple layout where to position your fume extractors and the central fan, including the length of ducting between each extractor. See ill. 1.
- Decide the air volume in each part of the system (recommended air volume per extractor is 1000 m³/h). See ill. 2.
- Calculate the pressure loss and ducting diameter for each sections (A, B, C and D).  
(All these calculations can be done directly on internet.)

### Duct section A.

Determine the ducting diameter for section A by using the table above as follows: Recommended air velocity in the duct is 10-15 m/s. For the air volume 1000 m³/h the ducting diameter will be 160 mm. The air velocity in this case is equal to 13 m/s, the pressure loss is 18 Pa for a meter, 18 Pa x 3 m for whole section. A = 1000 m³/h, 160 mm, 13 m/s, 18 Pa x 3 = 54 Pa.

### Duct section B.

Repeat with section B, but remember you should now calculate 2000 m³/h in the duct. Here you get 11 m/s, 250 mm duct, 6 Pa x 3 m. B = 2000 m³/h, 250 mm, 11 m/s, 6 Pa x 3 = 18 Pa.

### Duct section C.

To calculate section C is a bit more complicated. In the column for 3000 m³/h there is no alternative between 10-15 m/s, only 9 or 17. Your decision on which is best to use will depend on the air velocity you have in the rest of the system. Remember, always try to maintain an even airflow. If you choose 17 m/s you get 14 Pa, but only 3 Pa with 9 m/s. Therefore 9 m/s will be best in this example. C=3000 m³/h, 315 mm, 9 m/s, 3 Pa x (2+4 m) = 18 Pa.

### Duct section D.

D = 4000 m³/h, 315 mm, 13 m/s, 6 Pa x 2 m = 12 Pa

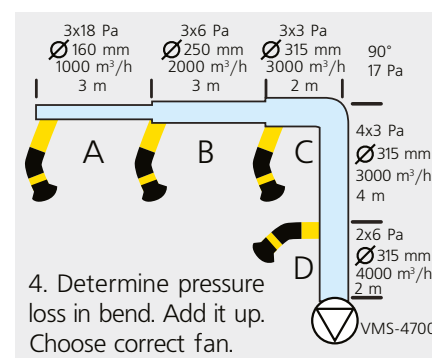
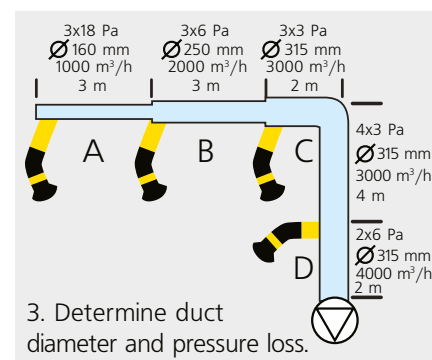
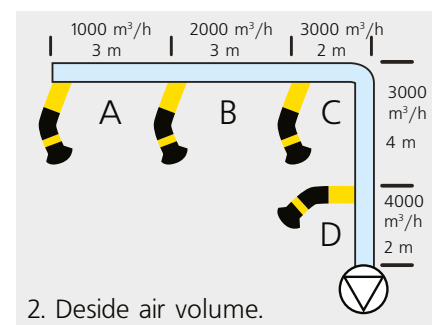
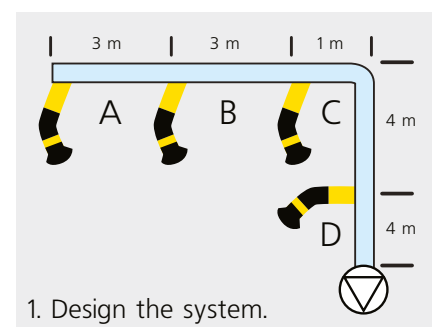
- When the last section is ready you now look at the 90° bend in the system. Bends will of course be the same diameter as the ducting adjoining them; here, that is 315 mm. 3000 m³/h is to pass through the bend and now you will check the table for resistance in bends. Look for 3000 at the table bottom and follow the diagonal for 315 mm diameter. In the left column for 90° bends, read the pressure loss in Pa. The result is approximately 17 Pa (see ill. 4). Now add together all of the Pa values you have noted down. That is, the four sections and the 90° bend: 54 Pa + 18 Pa + 18 Pa + 12 Pa + 17 Pa = 119 Pa. To this you add the pressure of the fume extractor, furthest away from the fan. Let's assume this is a WBE extraction arm. At 1000 m³/h WBE has 350 Pa. So the total will be 119 Pa + 350 Pa = 469 Pa. This figure tells you the maximum pressure loss in the system and determines the fan to use. The total pressure loss over the other fume extractors will be lower, the closer you get to the fan. Therefore it is recommended to use adjustable dampers for each fume extractor.

You have now designed your system! You have created an even airflow in the system and you also know that you need a fan that extract 4000 m³/h at 469 Pa pressure loss. Remember to include the ducting on the outlet of the fan in your calculation on the demand on the fan.

## HOW TO SELECT YOUR FAN

Select a fan that meets your requirements of 4000 m³/h at 469 Pa. In this case it will be the VMS-4700 which gives you 3700-3800 m³/h at 469 Pa. This unit will give 950 m³/h for each fume extractor, which well meets the recommended demand of 1000m³/h.

This document information might be changed without notice. Product availability may differ by country.



# Quick & Easy: How to design and install your system

## INSPIRATION AND HOW TO ACHIEVE THE BEST OPERATION AND COST EFFICIENCY OF YOUR SYSTEM

SovPlym offers a complete range of products and accessories to tailor-make any fume and dust extraction system. The possible variations are endless. On the following pages you will find some of the most common alternatives of installations. ALL SHOWN RECOMMENDATIONS ARE GENERAL AND HAVE TO BE MODIFIED FROM REGION TO REGION, DUE TO AVERAGE CLIMATE, LOCAL LEGISLATION AND SO ON.

### SINGLE WORKPLACES

SovPlym's large range of fume extraction arms includes everything from low ceiling work bench extractors, up to 8 m long suspension arms. For shorter arms (1 m – 4 m) support arms are available, which allow you to install a fume extractor close to where you need it, even if there are no natural installation point, like walls. This location then can be served individually by its own fan mounted directly onto the fume extractor.



BEA-3 with standard mounting bracket and separate fan



Ceiling mounted BEA-3 with support arm SPA-110 or SPA-220



Wall mounted BEA-3 with SPA-110 or SPA-220



Floor mounted BEA-3 with SPA-220 and separate fan

### SYSTEM SOLUTIONS

1. Even if you use several fume extractors, there is nothing to prevent you from mounting separate fans on each individual fume extractor. On the contrary, this will give you even more flexibility to make changes to your system in the future. Each fume extractor has its own fan with its own outlet through the wall. The saving of energy is handled by Energy Control EC, so that heated air is only extracted during work.



System: 3 x WBE-2 with separate fans and energy controls.



Central system: 3 x WBE-2 with separate fans and energy controls, connected to control unit CB for controlling the duct fan (max. pressure 200-400 Pa).

2. Separate fans and energy savers are an excellent solution when you need to connect the fume extraction to a central ducting. The airflow in the central duct then is handled by low-pressure duct fan. The energy controls are connected in series to a control unit, which starts and stops the duct fan at the same time as the fume extractor fans. The advantage with a central duct is that you only need one outlet through the wall. The system will demand a non-return dampers on the outlets of each fan.



3. System solutions with a central fan can be carried out in many different ways. The simplest solution is to connect the fume extractors to a central duct and a fan, with enough capacity, at the other end. The fan will then, all the time, with full power extract all fume from the extractors. This solution is normally used in new buildings, where the extraction from individual processes has been calculated as a part of the total ventilation required.

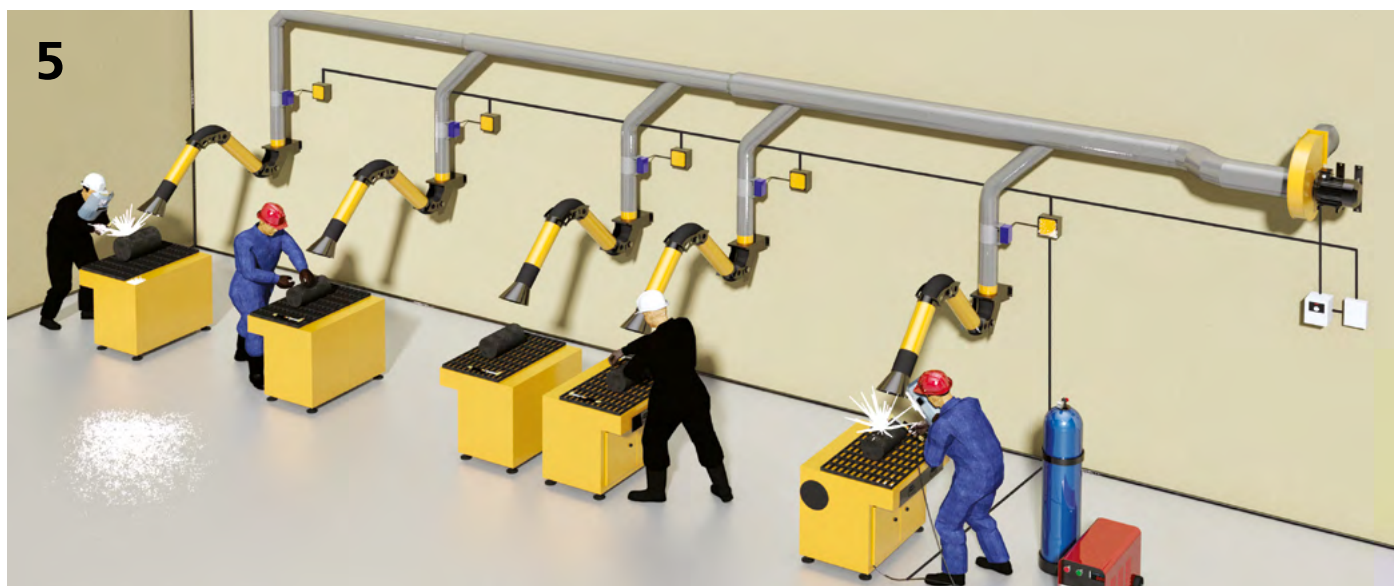


Central system: 3 x BEA-3 with central fan VMS-4700. The fan installed is due to the number of working spots and if the work is continuous or intermittent: VMS-3000: 1-2, VMS-4700: 2-3.



4. If you already have a central system that satisfies your extraction needs but you do not want to waste heated air, you can modify your system by fitting automatic dampers and control units (MCC or Light sensors, sPCU-1000). The system will then only extract air when welding is actually being carried out, and therefore produce enormous energy saving.

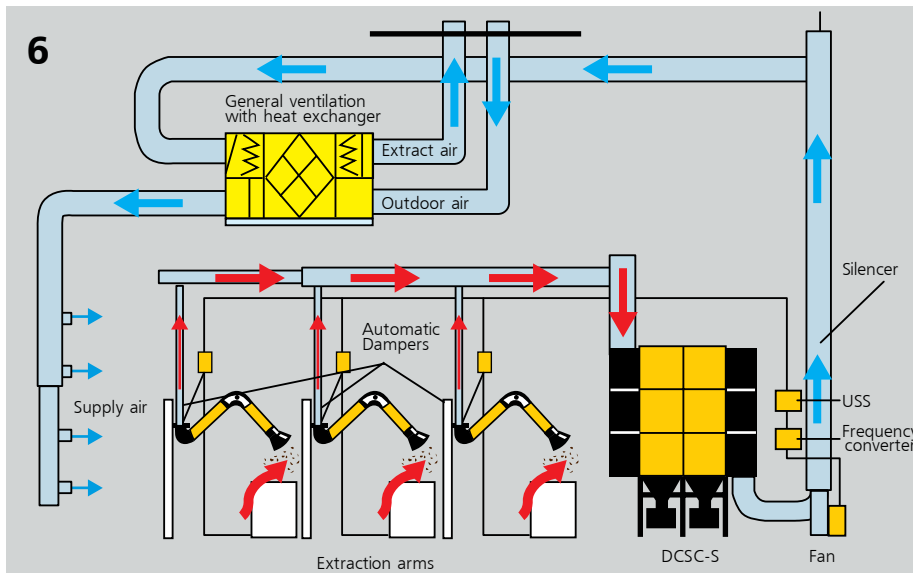
Central system: 3 x BEA-3 with automatic dampers AD, control box for automatic damper ICE-LC, control unit sPCU-1000 and a central fan VMS-3000 or VMS-4700. The fan is due to how many gull time work spots: VMS-2100: 2-4, VMS-3000: 3-6, VMS-4700: 4-8.



Central system: 5 x BEA-3 with automatic dampers AD, control box for automatic damper ICE-LC, MSS or Light sensors, USS, frequency converter and central fan VMS-6000 or TEF-765.

5. To perfect a system using automatic dampers, a frequency converter, or variable speed drives as they are often called, is used to control the amount of air exhausted into the system. A signal coordinator USS via MSS/ Light sensors and ICE-LC constantly reads if dampers are open or closed. The system then

adjust accordingly to the number of opened extraction points that are open at that moment. Minimal heat loss, lower power consumption and reduced noise provide benefits that pay for themselves. This is a smart way to optimize your energy cost.



Central system: 3 x BEA-3 with automatic dampers AD, control box for automatic damper ICE-LC, MCC or Light sensors, USS, Frequency Converter, process filter and a central fan. Process ventilation incorporated into general ventilation system including a heat exchanger.

6. To get a fully automatic system you add a filter and a heat exchanger. If the system operates with substances that are not allowed to recirculate directly a heat exchanger system might be used to collect the energy from the heated air being exhausted from the process. This system with automatic dampers, MCC or Light sensors, signal coordinator USS and frequency converter adjust the amount of air exhausted precisely. A filter cleans the exhausted process air and when the energy from the cleaned air is collected in a heat exchanger to optimize the technical and economical solution. This solution reduces your energy costs remarkably and reduces your life cycle cost (LCC). This is the best recommendation.

## POINTS TO CONSIDER WHEN DESIGNING YOUR SYSTEM

SovPlym's large range of fume extraction arms includes everything from low ceiling work bench extractors, up to 9 m long suspension arms. For shorter arms (1 m–4 m) support arms are available, which allow you to install a fume extractor close to where you need it, even if there are no natural installation point, like walls. This location then can be served individually by its own fan mounted directly onto the fume extractor.

### 1. Single workplace, remote location.

A mobile fume extractor is often a simpler and cheaper solution than installing long expensive central ducting systems.

### 2. Connecting to an existing ventilation system.

This can be quite difficult as you always have to consider the following questions:

#### Has the existing fan the necessary capacity to handle more fume extractors?

Since the capacity of the fan is limited, larger number of extraction arms can be connected to the same fan only in case when some of the arms are not being used simultaneously. In this case the system should be equipped with automatic dampers and control units, to close the extraction arms, which are not being used at the time.

#### Will the central ducting system be able to handle the increased air volume?

Since ducting systems are built to pass certain amount of air at a certain speed, it is not desirable to add new extraction points and thereby change the air volume in the system. This will lead to increased air resistance inside the ducting and will affect the working condition of the whole ventilation system. Before doing any modifications to existing ventilation systems, please consult our specialists.

### 3. Separate fans or central fan system.

Separate fans having their own outlet through the wall or ceiling brings the advantage that every workplace is absolutely independent of the other. The extraction rate will not vary with the number of fume extractors in use at any given time and it is easy to move extractor units. A central fan requires a central ducting system to link the different work stations. Always ensure that the ducting does not obstruct any overhead cranes or other high-level equipment. If so, evaluate the possibility to split the system and use two smaller central fans.

### 4. Demand controlled ventilation.

With the increased costs for energy and the awareness of our environment, demand controlled ventilation systems are the best solution. Operating with a minimum of air volumes and regaining the already heated air, this is the long term solution. The life cycle cost (LCC) is in most cases lower on these type of system than on conventional, lower investment systems.

# Notes



# Notes

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