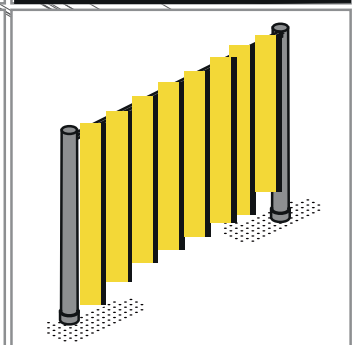
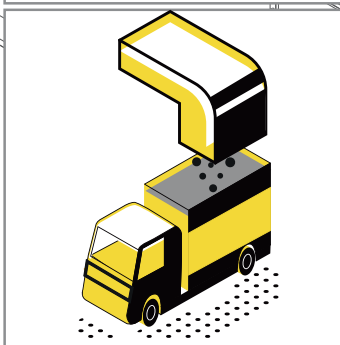
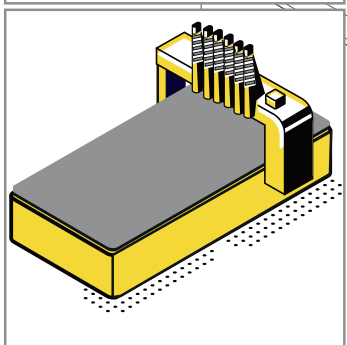
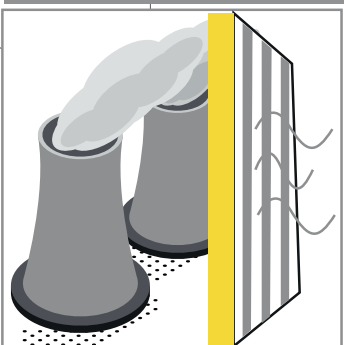
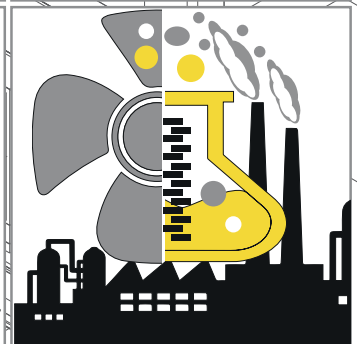
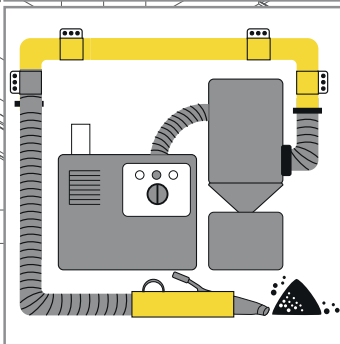
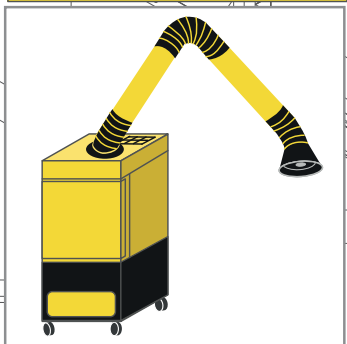
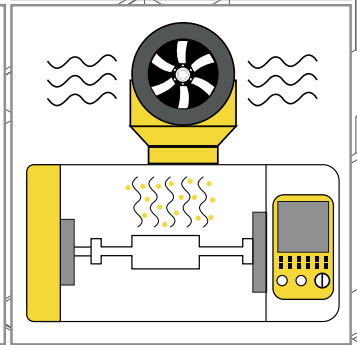
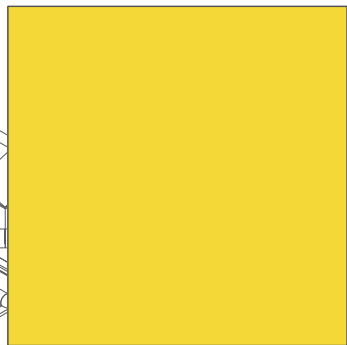
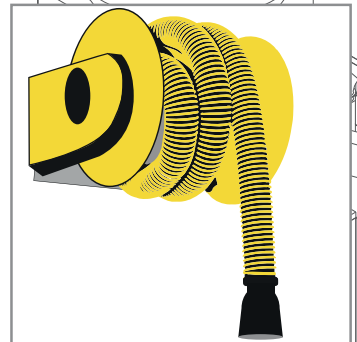




# TECHNICAL SOLUTIONS



# About company

Our company - SovPlym Ltd - for many years is an acknowledged leader in the field of manufacturing and supply of industrial ventilation, aspiration equipment, as well as vacuum cleaning systems and systems for removal of vehicle exhaust gases. Along with this, we gradually introduce modern techniques in fighting with harmful influence of industrial noise, weldign radiation, dust and smoke in workshops on humans.

For over 30 years we offer advanced solutions for creation of safe and healthy working conditions, providing MAC values in working zones and decreasing of dumping of harmful pollutants to atmosphere. The range of offered services includes development and project documentation, manufacturing, installations, start-up, warranty and regular service as well as after warranty maintenance.

30 000 companies have chosen SovPlym Ltd as a professional and reliable partner for high quality equipment, fast responding, timely delivery and service. References from our repeated customers - best arguments towards cooperation with us.

Founded in 1989 in Saint-Petersburg (Russia), today SovPlym Ltd holding is a dynamically developing company of qualified specialists, resulting in thousands of successful projects fulfilled over years of work, huge experience, professional knowledge and high competence. We are proud with the results of our hard work and positive references of our partners, which give us strength and make our work worth going further in future.



**600**

staff members in SovPlym Ltd



**2**

manufacturing plants in Saint-Petersburg and Ekaterinburg



**20 000 m<sup>2</sup>**

are of manufacturing and warehousing facilities



**15**

**15 business days**

manufacturing time for standard products



**300**

product names (over 200 manufactured at own factory)



**14**

branches in Russia and abroad

## Manufacturing resources and development of SovPlym Ltd.

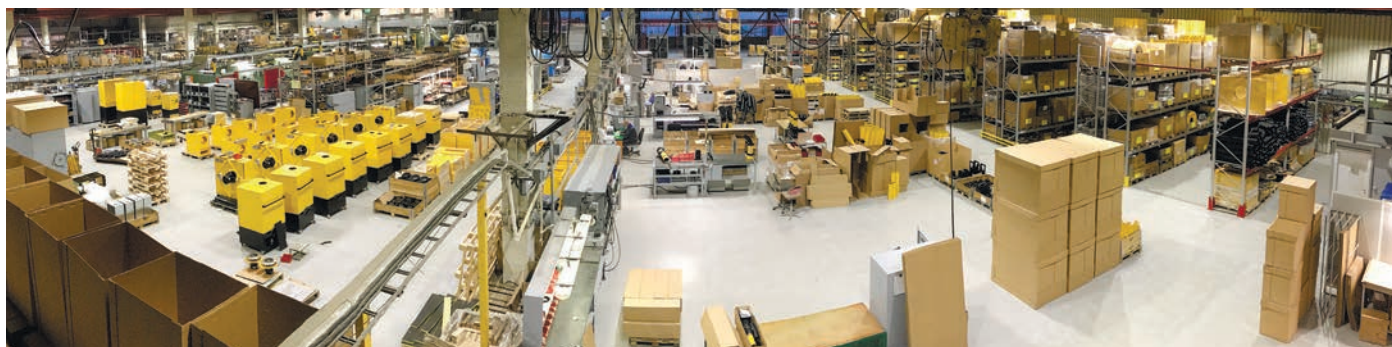
In 2019 SovPlym was celebrating 30 years from its foundation. During long history, company deserved a reputation of reliable manufacturer and supplier of high quality innovative filters and ventilation equipment.

2019 – ANNIVERSARY YEAR, was celebrated by increasing of industrial capacities and transferring of the manufacturing to new workshop of 20 000 square meters.

Industrial manufacturing of SovPlym is equipped with high quality machinery from world's leading manufacturers: AMADA, FINN-POWER, Hakka.

Company constantly increases the range of manufactured products due to new developings, creates new modifications from design and technology points for manufactured items. All equipment is manufactured only from high quality components and 100% passes the quality control before dispatch.

The factory has integrated quality management system, corresponding to ISO 9001-2015 standard. Except quality control of the output products, there is a strict incoming control of all material and components used for manufacturing of equipment and spares. Factory has introduced and successfully operates caring manufacturing system, including the system of rational organization of workplace – «5S».



## Factors, which determine stability of SovPlym in the market:

- **Customer oriented.** Over 30 years we put timely solution of customer's problems in first place in our work.
- **Quality.** We manufacture high quality equipment and are not afraid of complicated projects.
- **Large network.** We work in many regions and all time zones of Russia and abroad. Wide network of branches and dealers allows supplying the equipment with minimum losses and optimization of expenses for logistics.
- **Reliability.** Over 30 000 of repeated customers and cooperation with key companies in the country, among which are: клиентов и сотрудничество со значимыми для страны компаниями, среди которых: «EuroChem» group, «NLMK» group and «Severstal», «RosTech» corporation, «Rosatom» corporation, «PhosAgro» and others.
- **Competence.** Staff members of SovPlym are expert in their work. High professional qualification, following the best traditions of national engineering, allows manufacturing and supplying the quipment according to the single cycle principle - from development of design documentation to "turn key" solutions.
- **Technology.** Company uses only advance technologies and latest technical researches in industrial ventilation, aspiration, vacuum technologies, noise and spark protection.



## "SovPlym" in partnership with global brands of air cleaning equipment

Development of partnerships with leading European manufacturers of industrial air cleaning systems - one of the most important tasks, set by SovPlym. Large experience and advanced technologies of our partners allow SovPlym to make efficient solutions for tasks, stated by our customers.

**PLYMVENT**®

**Vanad**  
CNC Thermal Cutting Machines

**Sibilia**  
industrial vacuums

**FILTERMIST**

**PURAFIL**



**CIMBRIA**

**РУССКИЕ ШЛАНГИ**

**CEPRO**®  
LEADING IN WELDING SAFETY

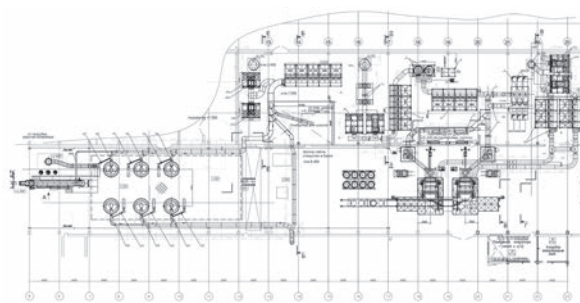
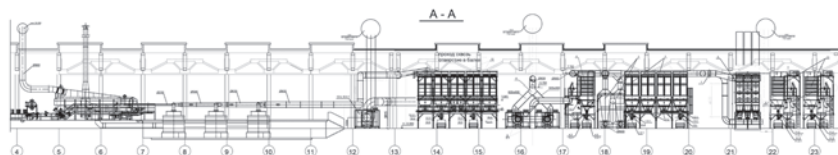
# Engineering, installation and maintenance

Successful work and wide range of tasks solved in the field of industrial ventilation and staff protection from harmful influence is only possible at precise processing of project and design documentation. For timely and high quality processing of such questions we created and successfully operate engineering centers of SovPlym Ltd in Saint-Petersburg and Ekaterinburg.

## Project department

Our own project team chooses equipment and makes projects for efficient solutions in a wide range of industrial processes and offers complete turn key solutions:

1. Pre-project investigations:
  - Examination of facilities;
  - Initial data collection;
  - Technical assignment preparation.
2. Project:
  - Development of project documentation, determining major technical solutions;
  - Development of working documentation with basic set of design drawings, certification of equipment and materials, required for manufacturing, along with construction and installation works;
3. Receiving of necessary approvals for passing the expertise.
4. Author's control at all stages of construction works.



## Design department

Development of equipment is done in 3-d designing software SolidWorks with usage of aerodynamic flows calculation module «Flow Simulation». Except that, we use AutoCAD, 3DS MAX and Revit software (for BIM projects). With building informational model (BIM) - process, based on usage of smart 3D-models - our technical specialists plan, make projects and show possible implementations of filtration equipment, manufactured by SovPlym, even more efficiently.

## Each unit passes following stages:

1. 3D designing;
2. Durability and aerodynamic calculations;
3. Issuing working design documentation;
4. Issuing service documentation;
5. Laboratory tests.



Due to usage of world's most modern technologies of own design department and modern full cycle manufacturing, SovPlym offers its customers wide range of high quality equipment and successfully introduces optimal solutions on air cleaning inside premises all over the world, improving labor conditions and increasing its productivity.

## Installation and maintenance

SovPlym Ltd is a participant of several professional project, construction and research organizations. We offer full range of works on installation and maintenance:

1. Author's supervision;
2. Installation supervision;
3. Installation works;
4. Start-up works;
5. Warranty and maintenance services.





# CONTENTS

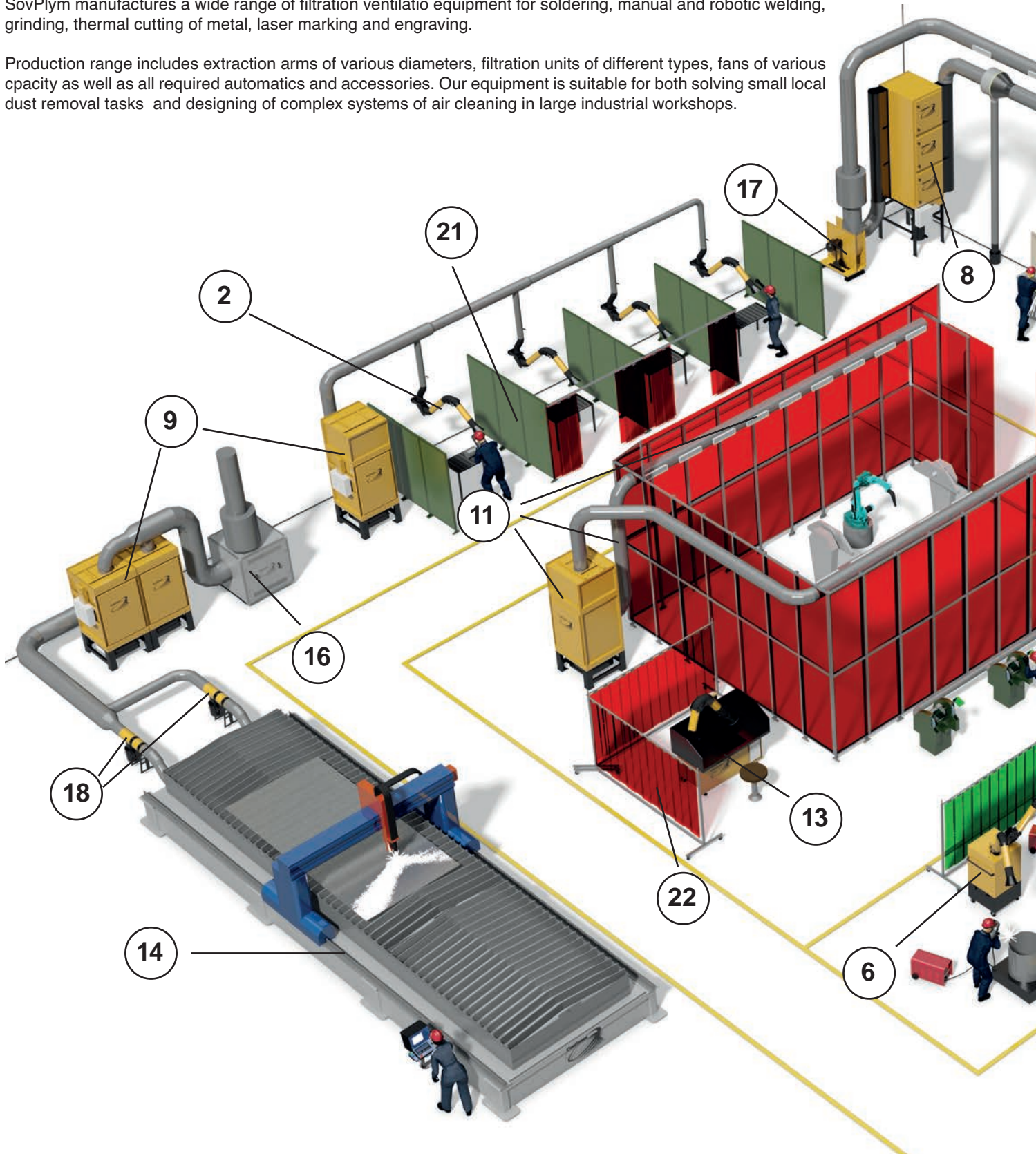
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# 1. LOCAL EXHAUST EXTRACTION VENTILATION SYSTEMS AND PROTECTIVE PARTITIONS

## Local extraction ventilation systems

SovPlym manufactures a wide range of filtration ventilatio equipment for soldering, manual and robotic welding, grinding, thermal cutting of metal, laser marking and engraving.

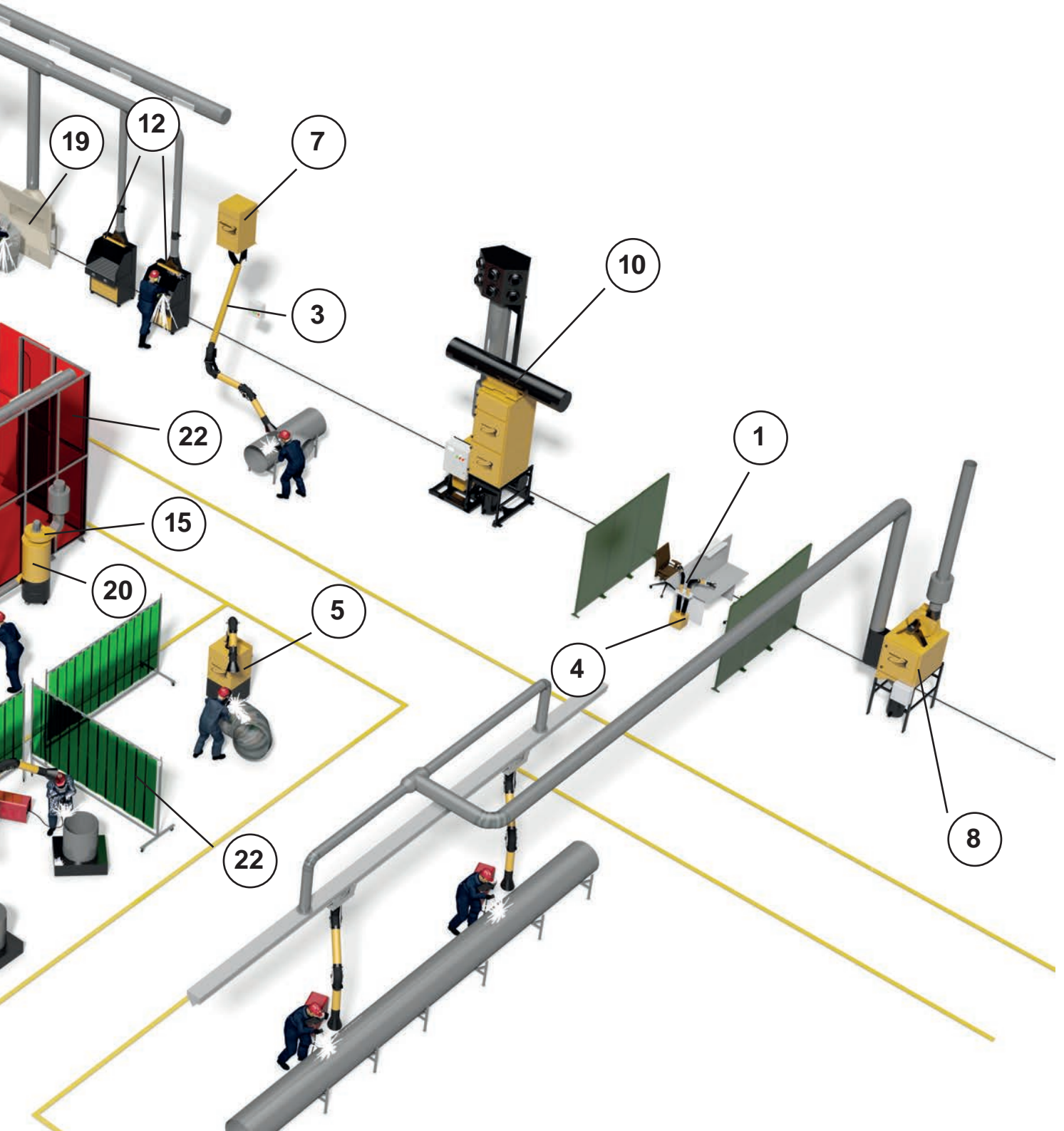
Production range includes extraction arms of various diameters, filtration units of different types, fans of various capacity as well as all required automatics and accessories. Our equipment is suitable for both solving small local dust removal tasks and designing of complex systems of air cleaning in large industrial workshops.



○ The numbers in the picture indicate the model range of devices, a brief description of which is presented on the pages:

## Protective partitions

Various types of protective partitions are often supplied as a part of local extraction ventilation system, since they protect workers from welding radiation, sparks and splashes of metal, as well as efficiently separate work places and decrease noise level. More information on protective partitions can be found on page 16.



The numbers in the picture indicate the model range of devices, a brief description of which is presented on the pages:

# 1.1 EXTRACTION ARMS



1

## Lab Arm



Table top extraction arms for removal of smokes from soldering, chemical vapors and dust.

This units can also be manufactured from stainless steel.

## WBE



Compact telescopic extraction arm for removal of smoke from welding, oil mist, dust and other pollutants at small size work places with low ceilings.

2

## BEA-M



Lifting-rotary Ø160mm extraction arm for removal of welding fumes, oil mist, dust and other pollutants.

This units can also be manufactured from stainless steel.

## BEA-200



Lifting-rotary Ø200mm extraction arm, with increased capacity, for removal of welding fumes, oil mist, dust and other pollutants.

3

## EF-M



Console based lifting-rotary Ø160mm extraction arm for removal of welding fumes, oil mist, dust and other pollutants.

## EF-200



Console based lifting-rotary Ø200mm, with increased capacity, extraction arm for removal of welding fumes, oil mist, dust and other pollutants.

## EC



Console based rotary extraction arm Ø160mm with vertical telescopic mechanism for removal of welding fumes and similar types of smokes.

## Accessories



Support poles, columns for installation of extraction arms on the floor in any part of workshop.





# MOBILE FILTERS

## 1.2

4

### DCA-P-300



Portable filter for soldering with low noise level, adjustment of airflow, combined filter (HEPA, activated carbon), suitable for two table top extraction arms.

### ESP-M-1600



Mobile electrostatic filter for low intense welding operations and welding of oily metal parts.

### DCSC-M1



Mobile mechanical self-cleaning filter for welding and grinding operations and capturing of various types of dust. Integrated cleaning system is activated by timer. Requires external connection of compressed air.

5

### DCSC-M5



Mobile mechanical self-cleaning filter for welding and grinding operations and capturing of various types of dust. Advantages: cleaning system with  $\Delta P$ -function; vertical easy removable cartridge; integrated compressor; low noise level; optional mesh pre-filter.

6

### DCSC-M6



Mobile mechanical self-cleaning filter for welding and grinding operations and capturing of various types of dust. Activated carbon cartridge can be optionally installed for capturing of gases and smells. Increased capacity up to 2400 m<sup>3</sup>/h. Optional models: for two extraction arms and simultaneous work at two work places; for one extraction arm of increased diameter of 200mm; for one standard  $\varnothing$ 160mm extraction arm.

## 1.3 STATIONARY FILTERS



7

### DCSC-W5



Wall mounted mechanical self-cleaning filter with vertical cartridge, integrated fan in noise reduction casing and top side outlet, integrated compressor for welding, grinding, polishing and similar types of dust. Suitable for installation of one Ø160mm extraction arm.

### DCSC-W2



Wall mounted mechanical self-cleaning filter with two vertical cartridges, integrated fan in noise reduction casing and top side outlet, integrated compressor for welding, grinding, polishing and similar types of dust. Optionally suitable for one Ø200mm or two Ø160mm extraction arms.

8

### DCSC-S



Modular self-cleaning filter with horizontal cartridges for thermal cutting, welding, grinding and polishing of metals as well as other operations with various types of materials and formation of similar types of dust.

Recommended initial concentrations of dust up to  $2\text{g}/\text{m}^3$ . Optional models from 2 to 64 filtration cartridges (airflow  $600\text{--}64000\text{ m}^3/\text{h}$ ).

9

### MDV



Modular self-cleaning filters with vertical cartridges for thermal cutting, welding, grinding and polishing of metals as well as other operations with various types of materials and formation of similar types of dust. Recommended initial concentration of dust up to  $2\text{ g}/\text{m}^3$ . Various configurations (airflow  $3500\text{--}30000\text{ m}^3/\text{h}$ ). Optional models: with integrated fan in noise reduction casing and without integrated fan; optional outdoor installation for temperature down to  $-20\text{ }^\circ\text{C}$ .

10

### Diluter



Diluter system — technical solution for welding of large scale and long constructions. Diluter prevents accumulation of welding fumes and decreases background concentration of harmful substances in general volume of industrial workshop.

Work of the system is based on the principle of organized air circulation within workshop or separate workplaces. Welding fume cloud is forced to move by directed air jets and passes through filter with further returning back into workshop premises. Main advantages of Diluter system are autonomous and mobility. System does not require duct installation, and floor frame has compact size, allowing easy moving of the system around workshop when necessary with forklift truck. Along with long range reach (up to 50m) these advantages offer high flexibility to the customer in solving of ventilation task here and now as well as in the future. In case if process intensity increases, another Diluter system can be added. In case of relocation of the processes from one point in workshop to another, Diluter system can also be relocated.



## DCA-S-3X/4X

Stationary mechanical filters with replaceable accumulative cartridges for soldering, laser marking and engraving, contact welding and similar types of smokes and fumes. Filter has several standard sets, depending on combination and number of cleaning stages (2 to 4); pre-filter G3, main filter F9, HEPA filter H13, activated carbon filter M5.



## DCA-S-3X/X-4X/X

Stationary modular mechanical filters with replaceable accumulative filtration cartridges. Filters are modification of single filter modules DCS-S-3X and DCA-S-4X. Standard sets of modules are designed for the airflow from 5 000 to 12 500 m<sup>3</sup>/h.



## DCA-W

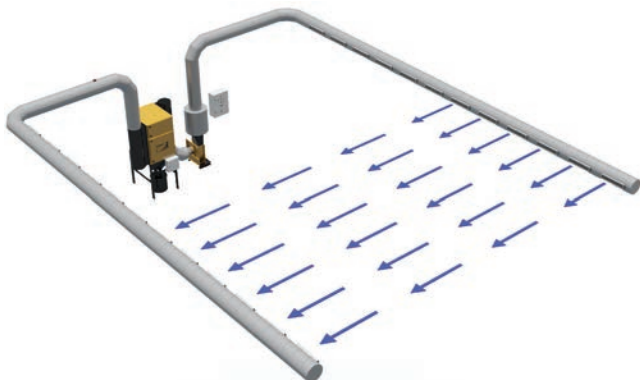
Wall mounted version of filters with accumulative cartridges and possibility of connection of one or two BEA extraction arms. Number of modules is determined by number of filtration stages (preliminary, main, HEPA, carbon). Filters can be optionally supplied with fans in noise reduction casing.



## MIF

Ion-exchange filter for gaseous components, allocated during some types of welding and thermal cutting of metals.

11



## Push Pull

Push-Pull system — technical solution for welding of large scale and long constructions. Work of the system is based on the principle of organized air circulation within workshop or separate workplaces. Workshops up to 24m wide use systems with push grids. Systems with push nozzles allow increasing the reach up to 50m.

Push-Pull system moves welding smoke cloud by the directed jets with the purpose of its capturing, filtration and returning back into the industrial premises. As a result of these actions, accumulation of welding fume is prevented and background concentration of hazardous substances is decreased in work zone and workshop in general.

Each filtration Push-Pull system — is an individually calculated and designed technical solution, considering construction parameters of the premises and placement of equipment inside it as well as special features of industrial process.

## 1.4 WELDING TABLES



### Welding-grinding table WTZ-1200

Professional extraction table, with protective screens of flexible strips, for removal of dust and fumes from light welding and grinding through exhaust grid, covering full table top. Suitable for connection to external filtration ventilation unit with capacity of 1200–2500 m<sup>3</sup>/h.

12



### Welding-grinding table WTZ-2500

Professional extraction table with turning protective screens for removal of dust and fumes from intensive welding and grinding through the table top grid and back draft panel. Suitable for connection to external filtration ventilation unit with capacity of 2500–3000 m<sup>3</sup>/h.



### Welding table CCB-1200

Basic model of welding table with integrated fan, self-cleaning filter, capacity of 1200 m<sup>3</sup>/h and extraction arm. Cleaning system requires connection to external network of compressed air. Optionally can be supplied with integrated compressor.

13



### Welding table CCM-1200

Full set of welding table: integrated fan, self-cleaning filter, capacity of 1200 m<sup>3</sup>/h, extraction arm, protective screens, LED lamp, rotary table. Cleaning system requires connection to external network of compressed air. Optionally can be supplied with integrated compressor.

14



### Modular extraction table MVS

Sectional extraction table for thermal cutting, removes dust and smoke, formed during plasma, laser, gas cutting of metal. Modular structure allows building up a system corresponding to the length of cut sheet of metal. Requires connection to corresponding exhaust ventilation system.





## RADIAL FANS

1.5

15

### VMA, VMK, VMS



Radial fans with welded steel body and aluminum impeller. Capacity of 150-5000 m<sup>3</sup>/h, pressure 1100–2450 Pa. Various models are equipped with various mounting options: bracker, floor support, flange for installation on filter.

16

### HPF-LI/RI



Radial fans with full size noise reduction casing and inspection door, positioned on the left (LI) or right (RI) side. Equipped with rubber-metal vibration isolators and reinforced flexible inserts inside noise reduction casing.

### HPF



Radial fans with increased capacity, airflow up to 25000 m<sup>3</sup>/h, pressure from 2800 to 5400 Pa. Steel welded body. Steel welded powder coated impeller. All models can be optionally equipped with full size noise reduction casing.

17

### TEV, TEVnr



Radial fans with square steel body, made without welding and aluminum impeller. Capacity of 500-11200 m<sup>3</sup>/h, pressure 1550–4300 Pa. Fans with "nr" index are supplied with light noise reduction casing. FTEV-9000/1100 models, as well as all "nr" models are additionally equipped with rubber-metal vibration isolators.



## DUST COLLECTORS CYCLONES, SEPARATORS

1.6

18

### CPO



Direct flow cyclone with supports for capturing of coarse and medium size dust. Capacity of 1000, 2500, 4000 m<sup>3</sup>/h. Designed for installation in straight duct segment.

### BCPO



Block of direct flow cyclones with supports for capturing of coarse and medium size dust. Capacity - 10000 m<sup>3</sup>/h. Designed for installation in straight duct segment.

19

### SVP-5000



Stationary extraction panel for capturing of dust at grinding and polishing workplaces for large scale items. Requires connection to central filter and/or exhaust fan.

20

### PU



Stationary dust collector for sharpening, grinding, polishing and similar types of machines. High cleaning efficiency due to cyclone first stage and bag filters as second filtration stage. Equipped with handle for mechanical bag shaking.

# 1.7 AUTOMATICS



## IWS



Induction sensor determines beginning/end of welding process by the presence of electrical current. Fixed to null cable of welding machine.

## LS-12



Light sensor on extractio nozzle, senses beginning/end of welding by light radiation. Serves as an alternative to induction sensors, for welding current less than 30A and gas welding.

## Frequency inverter



Provides required airflow in the system, by changing the rpms of fan according to the signal from USS.

## AD



Automatic damper with electrical motor. Available diameters 100, 125, 160, 200, 250, 315, 400mm. Activation controlled by damper control box ICE-LC.

## Control box CONT-M



Main control box for filters with automatic cartridge cleaning system by compressed air. Supplied with controller for up to 24 pneumatic valves, differential manometer with  $\Delta P$ -function, activating cleaning system upon estimated value of cartridge clogging.

## Control box CONT/SP



Control box for filters with automatic cartridge cleaning system by compressed air. Supplied with controller for up to 32 pneumatic valves. Cartridge cleaning is done according to set up value of frequency and length of pulses of compressed air.

## ICE-LC



Control box for automatic damper AD. Opening/closing signal comes from induction/light sensor or control button, situated on the nozzle of extraction arm with lighting.

## USS



Signal coordination unit send parameter changing signal for frequency inverter depending on the number of activated induction/light or other sensors. Suitable for connection of up to 8 control signals.

## PU



Controller for extraction arms with lighting. Lamp power supply and fan start with buttons on extraction arm nozzle. Suitable for connection of up to 5 halogen lamps up to 20 W.

## ES-90, PCU-1000



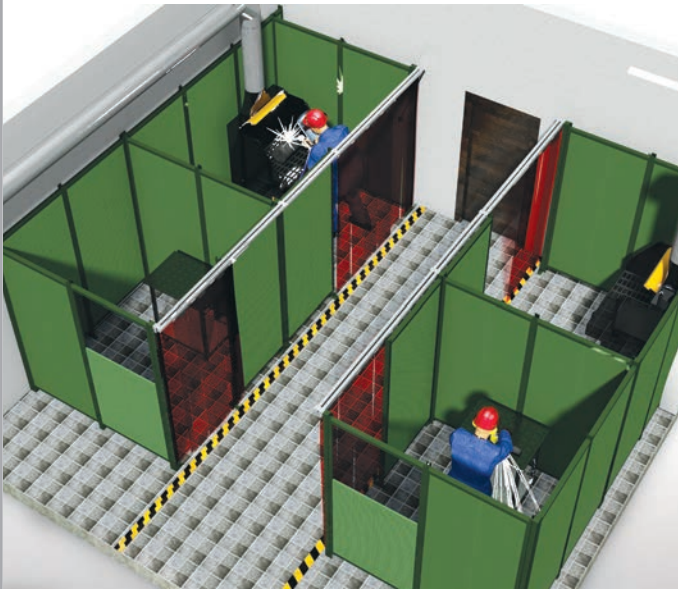
Energy saving controllers. Installed in systems without automatic adjustment of of airflow. Provide start/stop of the fan upon the signal from induction/light sensor or manually.

## 1.9 PROTECTIVE PARTITIONS



Since 2005 SovPlym supplies wide range of protective partitions. Main tasks for these partitions are protection from noise in industrial workshops, protection from welding radiation, fire, splashes and sparks of metal, localization of pollutants and separation of industrial processes.

21



### Noise adsorbing partitions, screens, cabins, casings

With standard panels you can create any configuration at your workshop for any task:

- quiet room (factory office);
- operator's cabin (for creation of comfortable conditions it can be equipped with climate control system);
- closed working cabin (for noisy industrial process);
- open working cabin (ideal for welding and grinding works);
- noise reduction casing (lowering of sound pressure from spot sources);
- noise reduction partitions, screens.

Standard panels 2,0x1,0 m and 2,0x0,5 m and thickness of 60mm are made of perforated metal sheets, noise adsorbing membranes and noise adsorbing material.

22



### Welding curtains, strips, screens

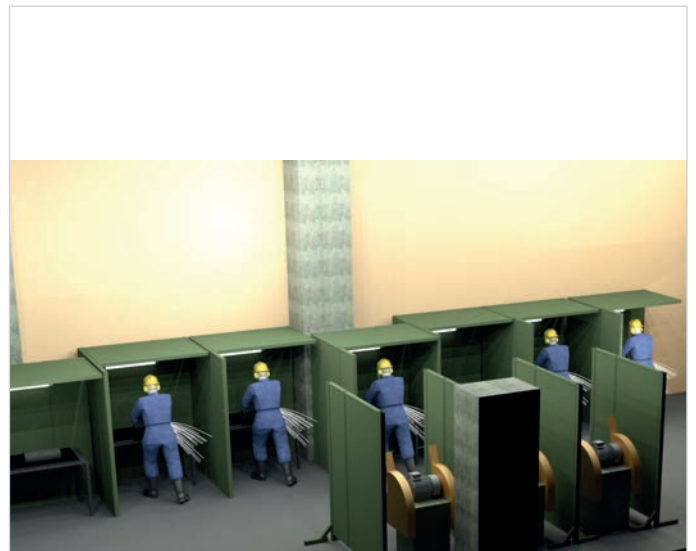
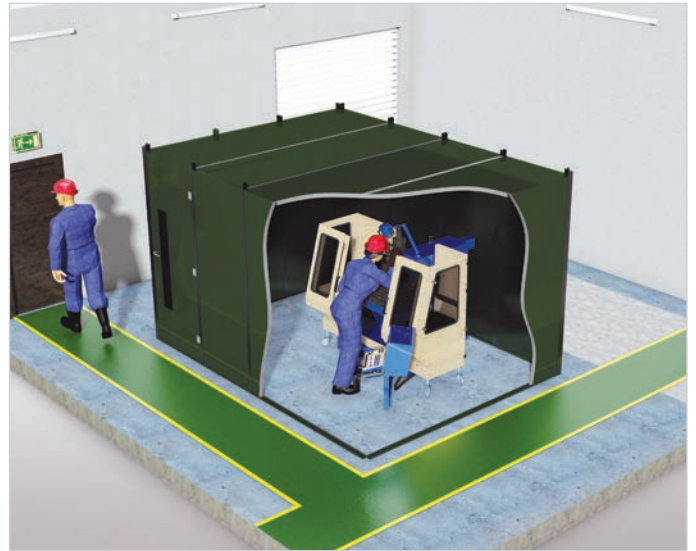
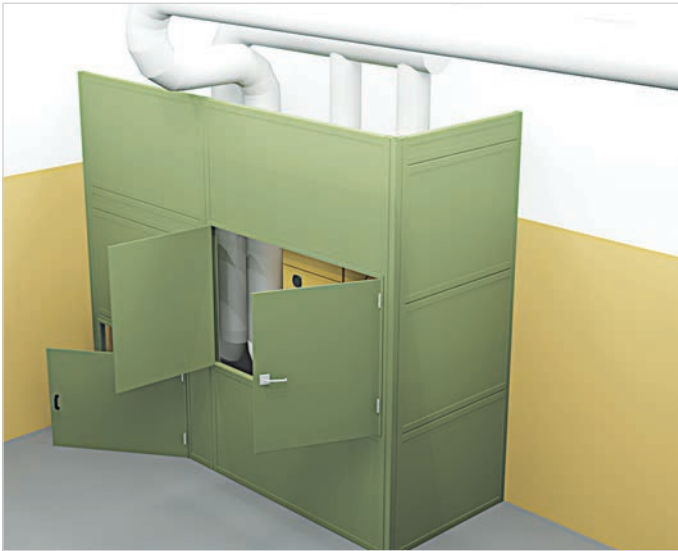
Designed for protection of staff from harmful welding radiation, noise, dust localization and separation of working zones inside industrial premises. Allow optimal usage of industrial facilities, and easy rearrangement of working zones.

Partitions are made of semi-transparent material, allowing not only to control the work inside the working zone, but also to increase the safety and comfort of welder's work due to absence of closed room feeling, better lighting etc..

Choice between these products is based on required durability: at periodical usage - use curtains, at regular - use screens, for often high load (passing zones) - strips.

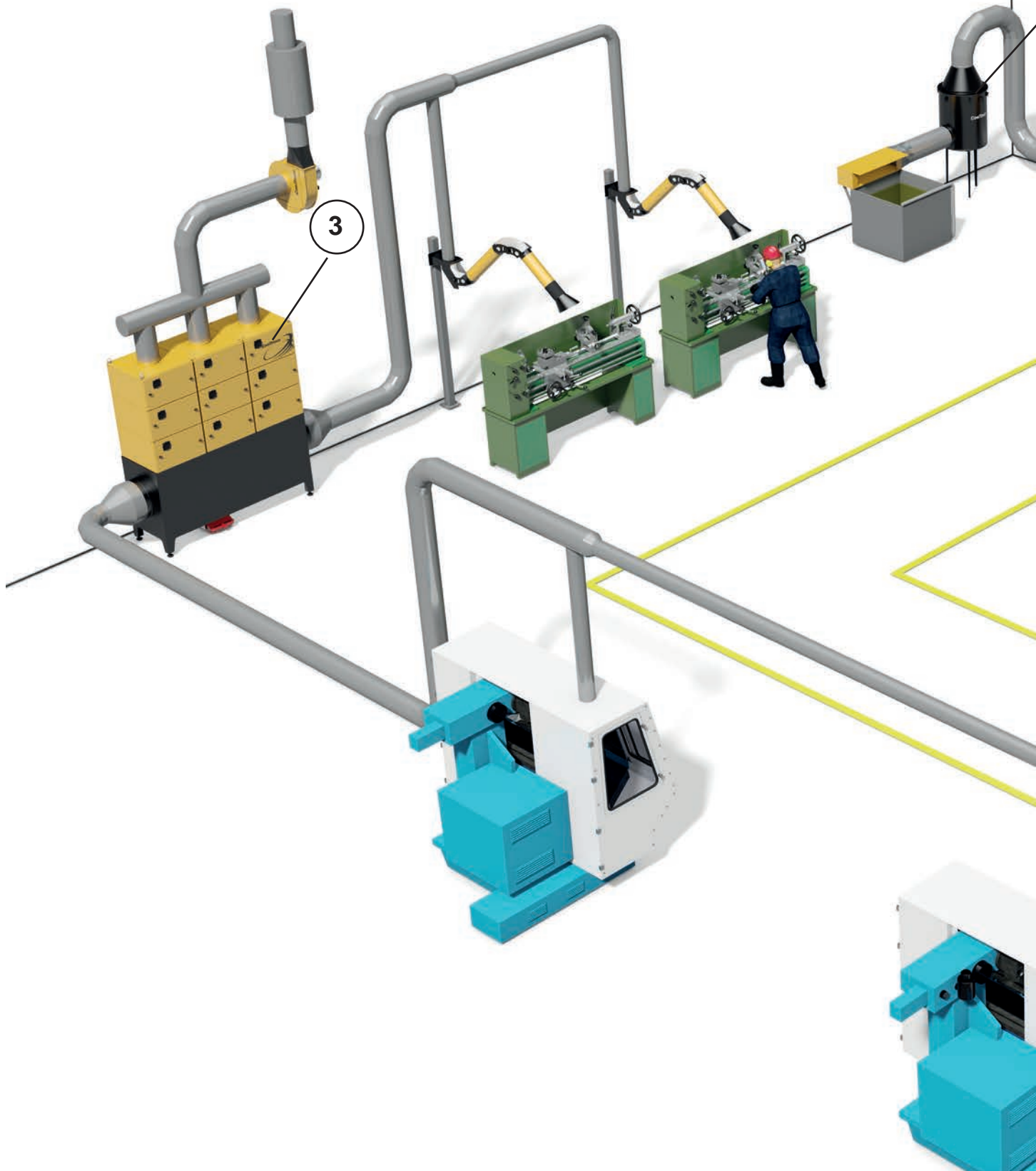
Curtains and strips require special metal support structures, while screens are supplied completely ready for use (on metal frame: with or without wheels).

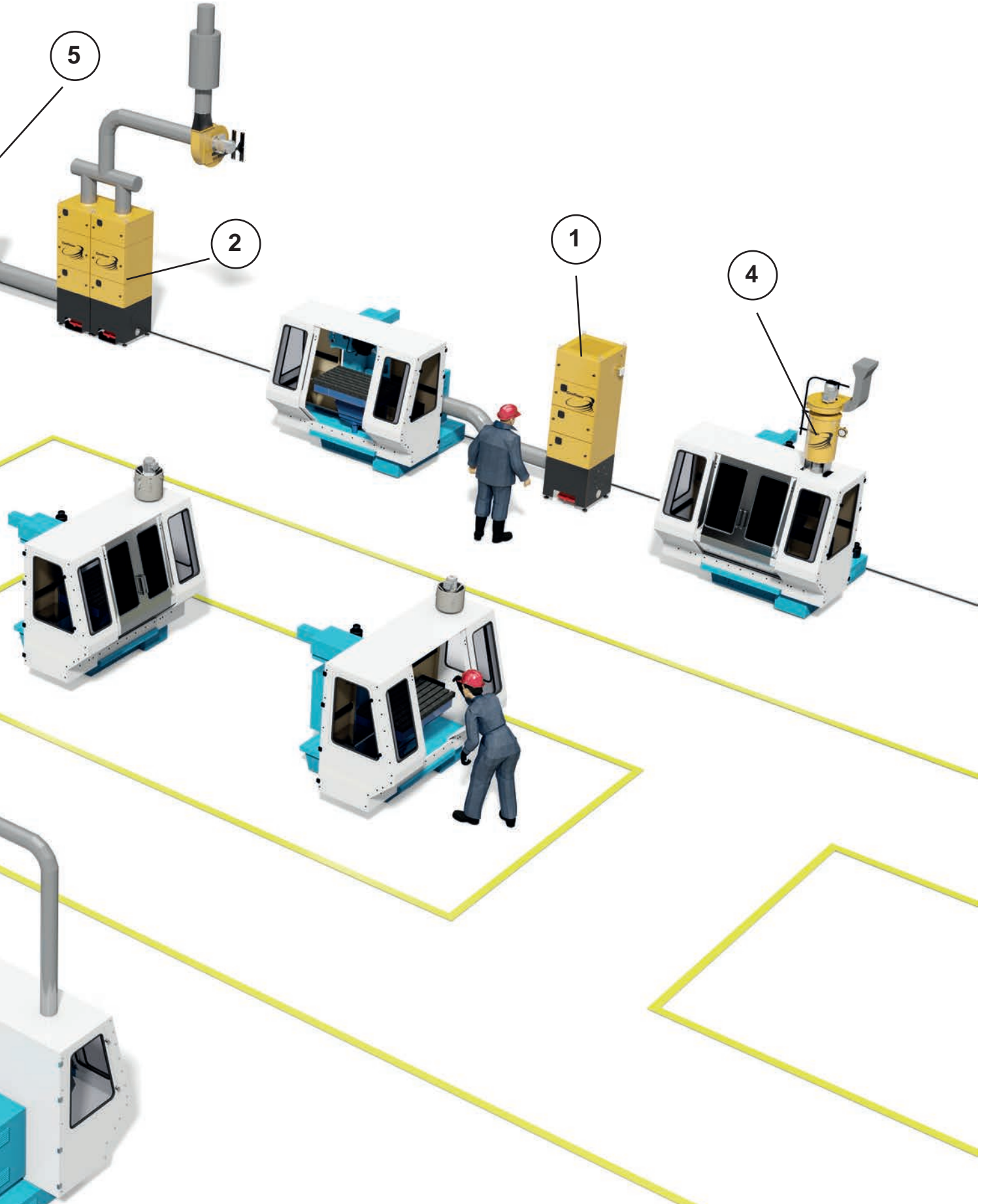




## 2. OIL MIST FILTRATION

SovPlym manufactures wide range of filters for cleaning the air from oil mist and smoke. These are compact filter for small airflow, modular filters for various capacity (2000–15000m<sup>3</sup>/h), with various number of cleaning stages (4 or 5 stages, including HEPA filter). In order to increase the service life of main filter cartridges, we offer our customers to install preseparators for oil mist, which are unique offer in the market.





The numbers in the picture indicate the model range of devices, a brief description of which is presented on the pages:

## 2.1 OIL MIST FILTERS



### MT-31/MT-32



Stationary filter for oil mist and smoke, formed from coolants, containing dirty oil of high viscosity and different types of dust. For 1-2 shift operation. Capacity up to 3000 m<sup>3</sup>/h.

1

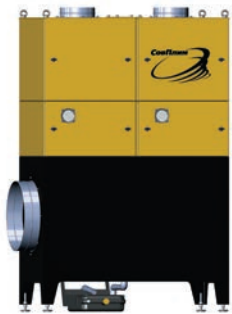
### MT-41/MT-42



Stationary filter for oil mist and smoke formed from coolants, containing clean (not polluted) oils of low viscosity. For 2-3 shift operation. Capacity up to 2000 m<sup>3</sup>/h.

2

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



Modular filters for oil mist on the basis of MT-31/32. Number of vertical modules can vary from 2 to 5. Number of cleaning stages either 4 or 5 (including HEPA). Capacity from 6000 to 15000 m<sup>3</sup>/h.

3

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



Modular filters for oil mist on the basis of MT-41/42. Number of vertical modules can vary from 2 to 5. Number of cleaning stages either 4 or 5 (including HEPA). Capacity from 4000 to 10000 m<sup>3</sup>/h.



4

## MM

Compact filter for cleaning the air from oil mist with optional installation directly on the machine. Capacity - 500m<sup>3</sup>/h.



5

## PMT

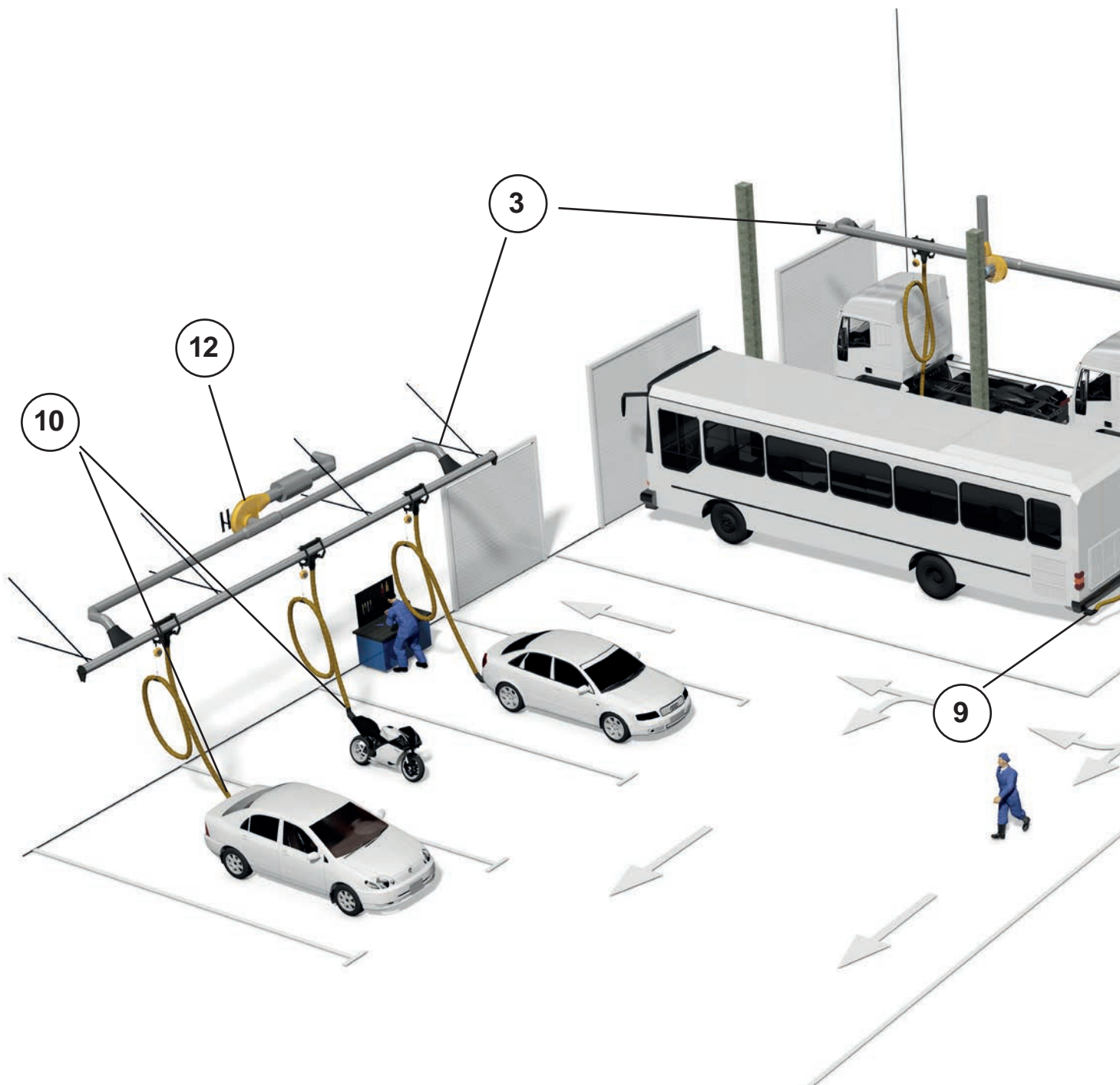
Oil mist preseparator, intended for removal of mist and vapors of oils and emulsion, used for cooling and greasing in metal processing equipment, from airflow. Main reason for installation – significant lowering of concentration of oil mist at the entrance into main filter.



### 3. VEHICLE EXHAUST GAS REMOVAL SYSTEMS

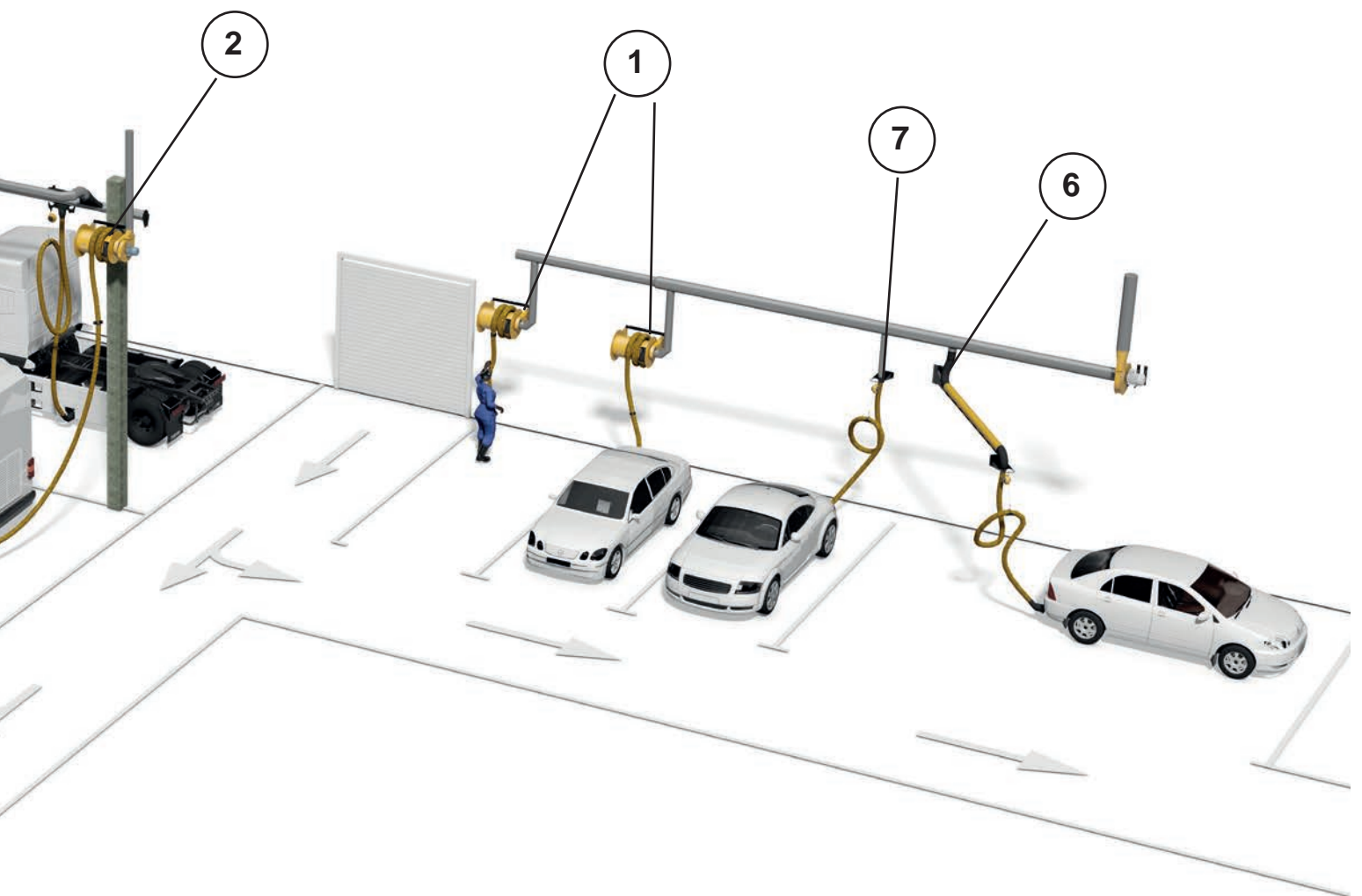
SovPlym manufactures full range of systems for removal of vehicle exhaust gases. Extraction devices, exhaust reels and rail systems. Along with main equipment, we manufacture exhaust hoses, gas intake nozzles, splitters of necessary diameters and thermal resistance as well as fans with required capacity.

Our product range is suitable for almost any types of vehicles such as motorbikes, cars, trucks, special and military vehicles, tanks, trains.



Exhaust gases are extremely dangerous for human health. Strong poisoning can lead to death, but even small portions are harmful, since toxic compounds get accumulated in human body. Poisoning by exhaust gases can cause various diseases including lung cancer.

Vehicle exhaust gases must be removed from the premises, where people are working. SovPlym equipment removes 100% of toxic exhaust gases from vehicles in garages, service stations, fire stations, parking lots of military bases.



The numbers in the picture indicate the model range of devices, a brief description of which is presented on the pages:

28-31

4

**Rail system SBT**

Special feature of the system is sliding balancer and automatic disconnection of pneumatic gas intake nozzle from exhaust pipe of the vehicle when leaving the garage.



5

**Rail system STR**

This system, same as SBT, is equipped with pneumatic grabber for automatic disconnection of gaz intake nozzle when leaving the garage. Due to rail-duct, several cars can be parked one behind another, sliding the carriage to required position.





8

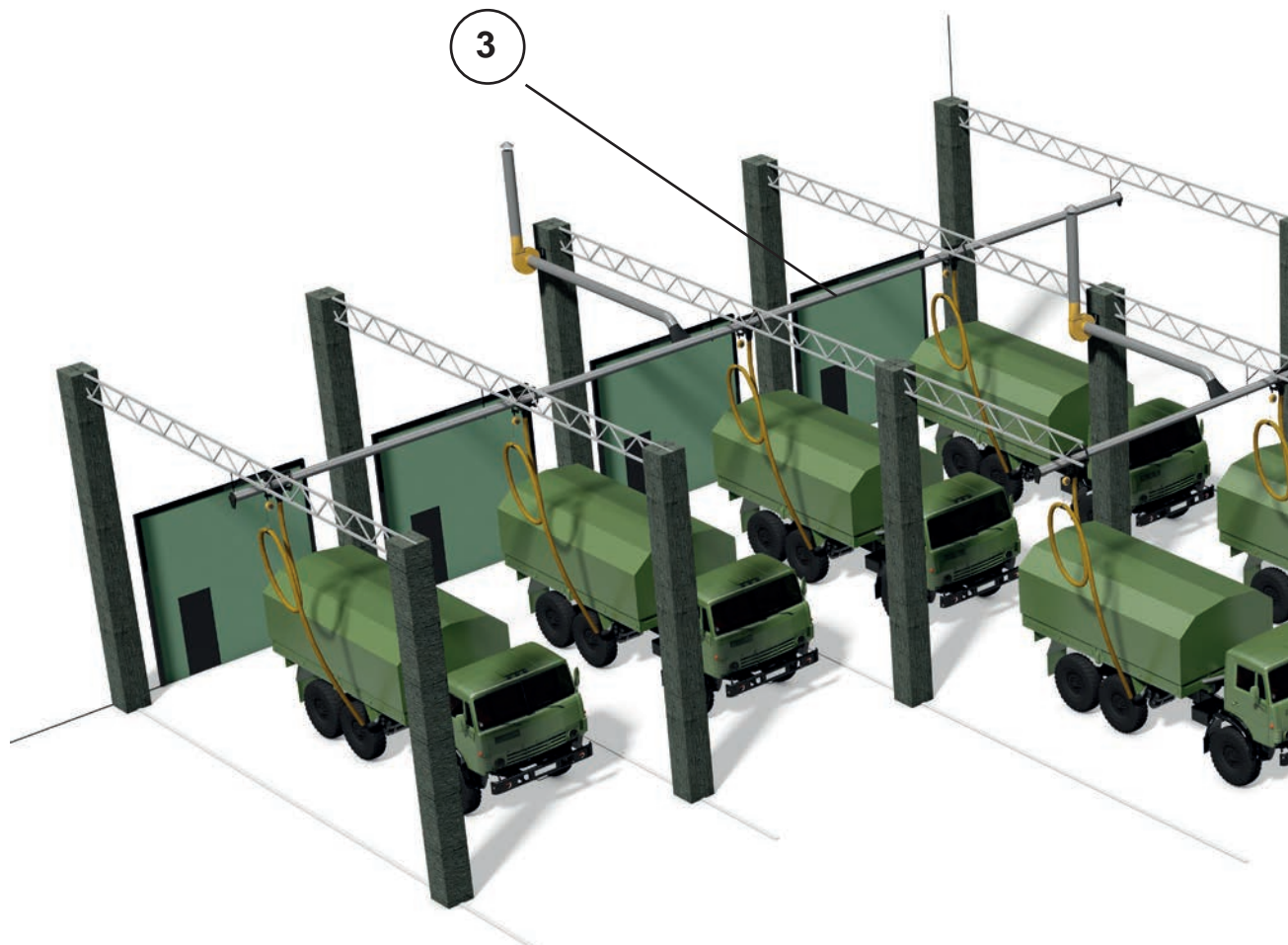
**Extraction device UKL**

Special solution for removal of exhaust gases from trains. Efficient and simple. Allows decreasing electricity consumption due to lowering the load for general ventilation.



## Application of vehicle exhaust gas removal systems in military garages and repair workshops

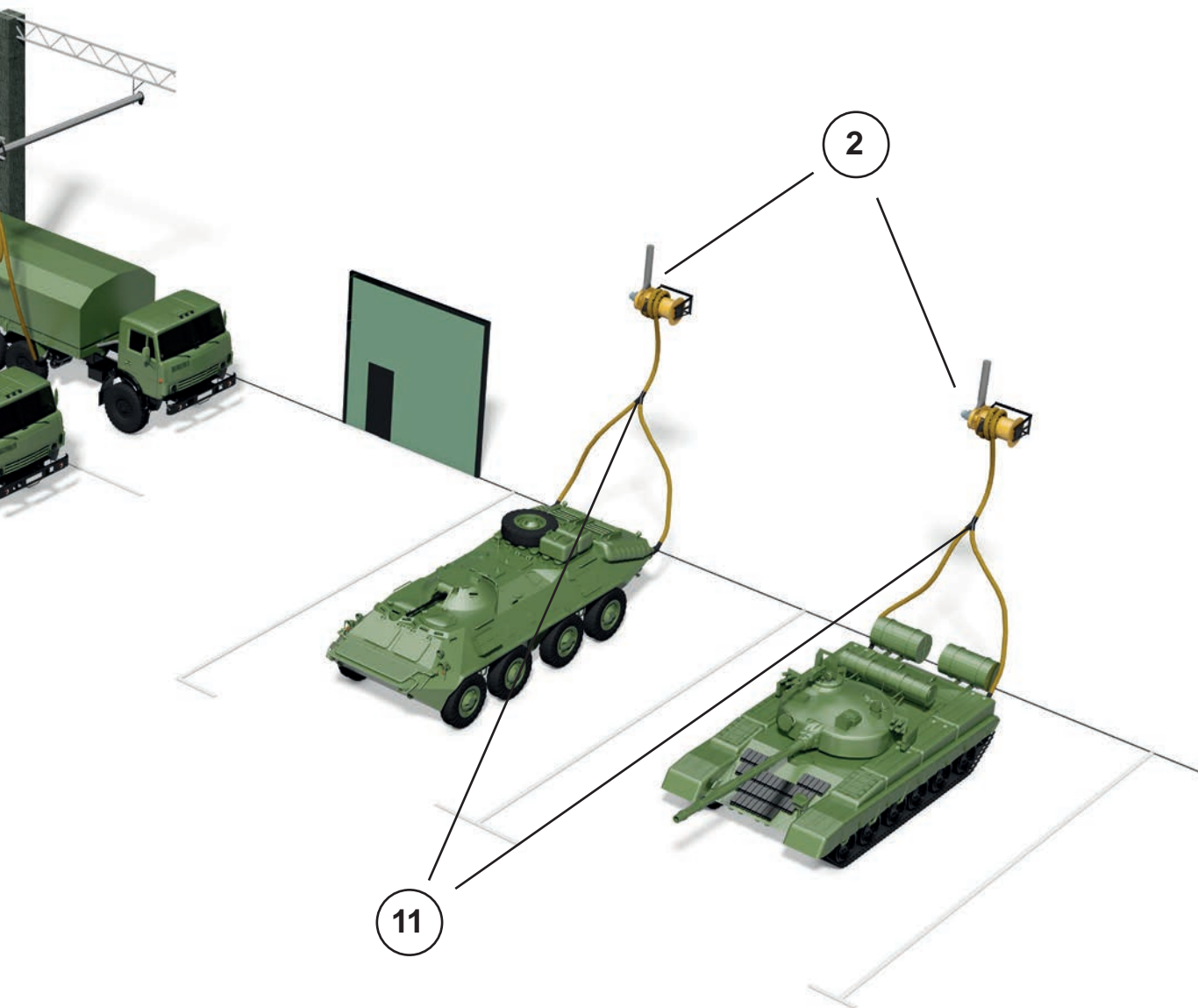
Due to special features, military vehicles are equipped with more powerful engines, producing large volumes of exhaust gases.



Vehicle exhaust gas removal systems are widely used in various premises:

- Closed storages of military vehicles - both heated and not heated;
- Garages - parkings of military, transportation, training and other vehicles;
- Vehicles on duty parking lots;
- Technical inspection and repair workshops;
- Daily technical inspection premises.

According to the norms of ministry of defence, it is required to use only local extraction systems. Local extraction systems provide 100% removal of exhaust gases directly from exhaust pipes to outside of premises due to airtight system of ducts, immediate activation and correct choice of technical parameters of extraction fans. SovPlym is making customized gas intake nozzles for any military vehicle.



## 3.1 EXHAUST REELS



1

### ARS



Extraction hose reels with spring driven mechanism for removal of exhaust gases from garages and car repair shops. Suitable for Ø75–150mm hoses with length of 5–12,5m.

2

### ARM/ARMF



Motorized extraction hose reels for removal of exhaust gases from large vehicles. For the workshops with high ceilings. Suitable for Ø75–200mm hoses with length of 5–12,5m.

### SA



Rotary console for increasing of hose reel reach radius.

## 3.2 RAIL SYSTEMS FOR REMOVAL OF EXHAUST GASES



3

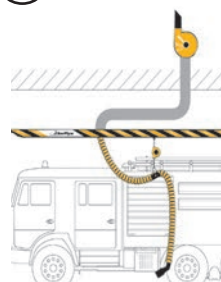
### ARST



Straight rail system for removal of exhaust gases for garages and technical maintenance workshops. Length of systems from 5,8 to 29 m.

4

### ARSL



Optimal solution for emergency vehicle garages with single parking lot. ARSL system is suitable for servicing the vehicles with exhaust pipes located in the bottom or back side of the vehicle. System lengths 6 and 9 m.

5

### STR



Rail system for removal of exhaust gases for long fire station, emergency and military garages. System lengths 15 and 30 m.



## EXHAUST GAS REMOVAL SYSTEMS

3.3



### UVP



Extraction device for premises of garages, technical maintenance workshops which are not equipped with stationary exhaust gas removal systems.

6



### VEGA

Rotary-console extraction device with mounting plate, balancer and hose with exhaust nozzle.

7



### DROPPER

Very simple but efficient solution on removal of exhaust gases in small car repair workshops and garages. These systems work at temperatures from -10 to +40°C.

8



### UKL

Extraction device for trains. For installation in railroad depots. Consists of rotary-console beam with extraction device with magnetic nozzle, fixed on it. Exhaust gases are removed by extraction fan through flexible hose and duct.



### Hose-SP



Hoses for extraction devices and vehicle exhaust gas removal systems. Three major types of hoses for various temperatures: up to +150°C, up to +200°C, up to +300°C)

## EXHAUST HOSES

3.4

## 3.5 EXHAUST NOZZLES



9



### iGrip-ST(G)

Steel nozzle with clamp for exhaust gases of high temperatures (up to 500°C).



### iGrip-ST

Steel exhaust nozzle for exhaust gases of high temperature (up to 650°C).

10



### RONG

Conical rubber exhaust nozzles for rail systems with clamp for Ø 100–125mm hoses. Temperature resistance up to 220°C.



### RON

Conical rubber exhaust nozzles for Ø100–125 hoses. Temperature resistance up to 220°C.



### iGrip-SK

Steel exhaust nozzle for vertical pipes of trucks. Suitable for Ø125–150mm hoses and exhaust pipes up to 235mm in diameter.

## 3.6 HOSE SPLITTERS



11



### MB, NB

Splitters for exhaust hoses for servicing the vehicles with double exhaust pipes.



## AUTOMATICS

**3.7**

### ENERGY SAVING EQUIPMENT

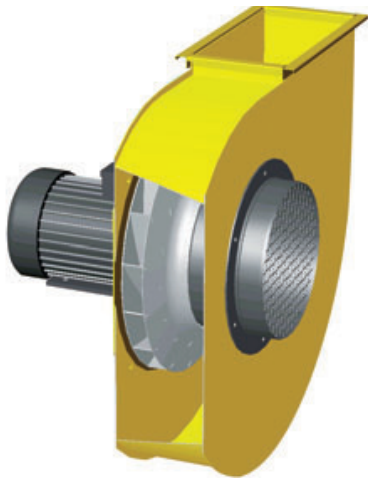


Various types of automatics: control boxes etc.

In automatic mode, signal for fan switching on is supplied to PCU-1000 from pressure sensor PS-1500. When starting the engine, pressure sensor is activated and sends the signal to automatic damper opening and switchin on the fan. When engine is switched off, pressure in the system decreases, automatic damper closes and fan goes off.



## FANS

**3.8**
**12**


### VMK, VMA, FR

Industrial radial fans of medium pressure with steel welded body, with capacity of 5000 m<sup>3</sup>/h and max full pressure of 2450 Pa.

SovPlym fans are used for various tasks, where extraction of clean or slightly polluted air is required (contents of dust not more than 0,1 g/m<sup>3</sup>):

- Removal of vehicle exhaust gases;
- Welding, soldering processes;
- Removal of smokes and oil mists;
- Removal of non sticky and non explosive dust.

## 4. ASPIRATION SYSTEMS

SovPlym Ltd. has a long term successful experience of implementing of aspiration systems with various capacity from 500 to 2 000 000 m<sup>3</sup>/h.

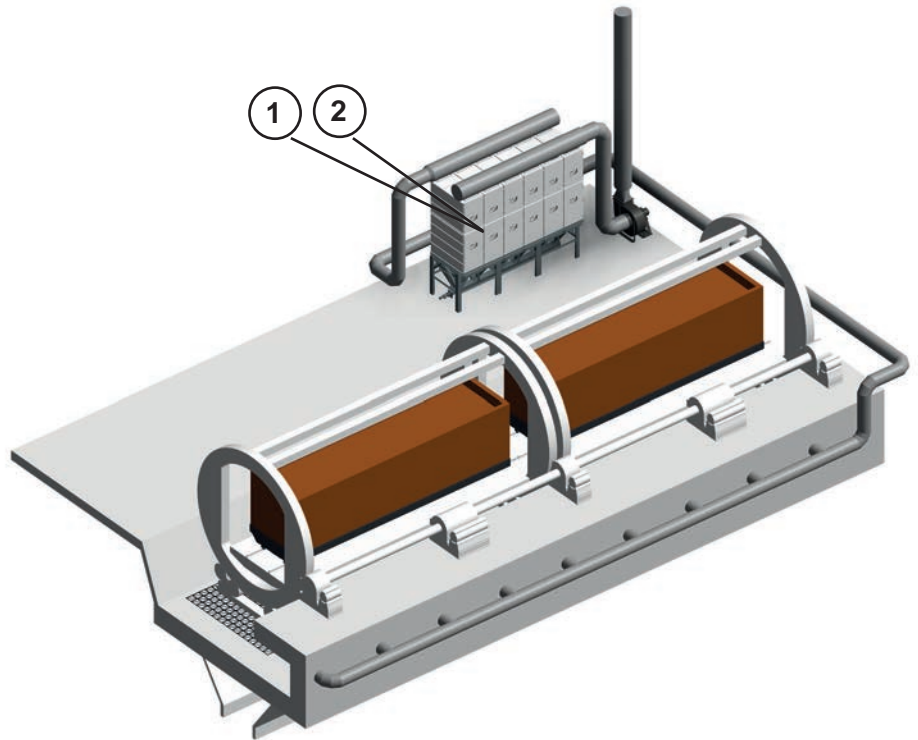
Our company offers turn key solutions of aspiration tasks, including usage of highly efficient aspiration enclosures and filtration equipment, which allows reaching safe workgin conditions for workers and improving of ecological parameters of the factory.

### Aspiration of car dumper

Applicable types of filters with pulse regeneration:

- Pocket filter SFN;
- Sleeve filter SFS.

Filters are placed next to car dumper and used for cleaning the air from dust, formed at unloading of cars with bulk products like ore, coal etc.

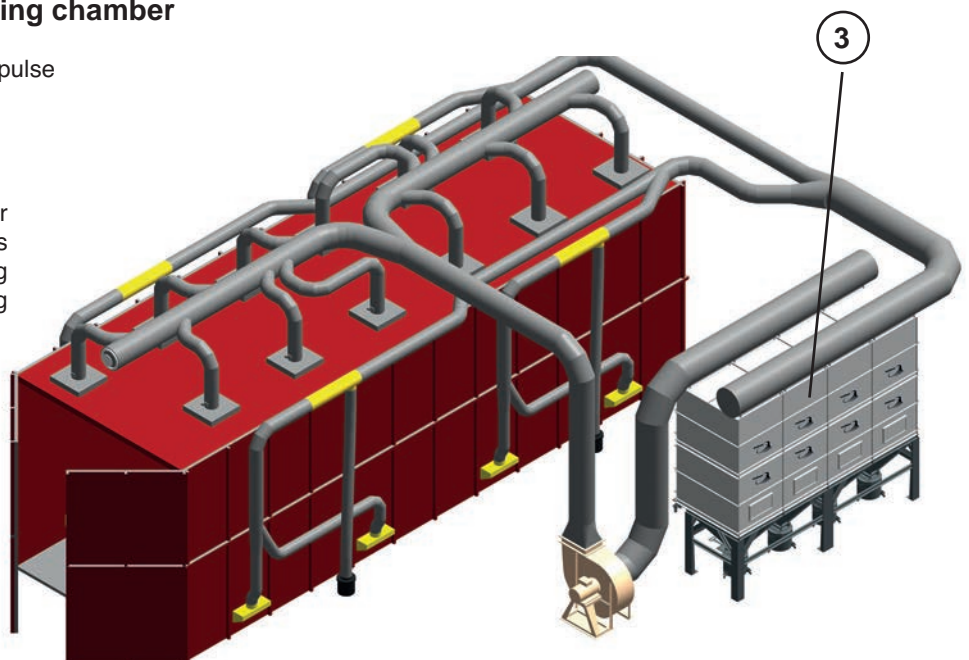


### Aspiration of shot blasting chamber

Applicable types of filters with pulse regeneration:

- Cartridge filter SFL.

Filters are intended for air cleaning from large quantities of fine dust, formed during work of shot and sand blasting chambers.





Production range of filtration equipment includes number of filters with various types of filtration elements (pockets, sleeves, flat cartridges, cylindrical cartridges) as well as various types of regeneration (pulse purging by compressed air and vibration shaking).

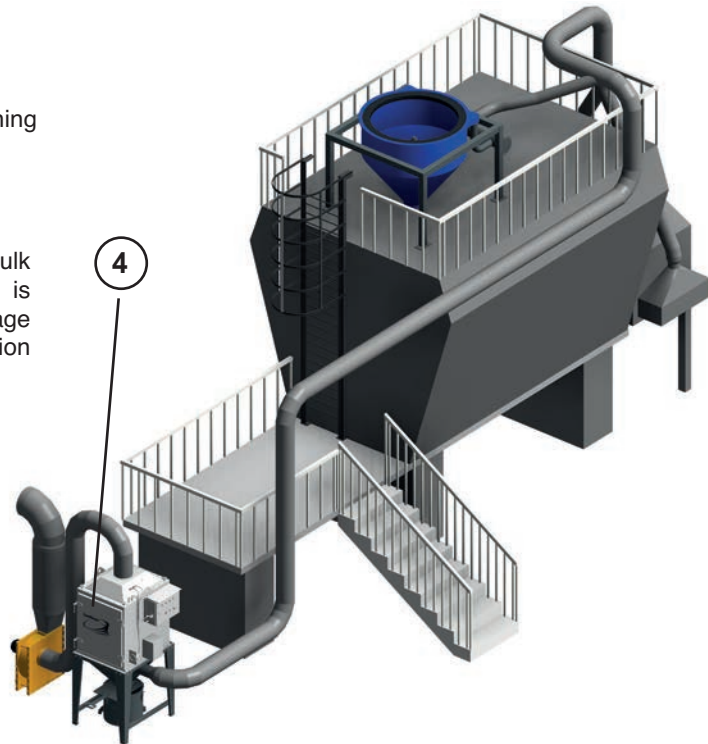
Industrial filters can be supplied with various options — standard, outdoor, antistatic, high-temperature or explosion protected.

### Aspiration of big bag debagger

Applicable types of filters with vibrational cleaning without usage of compressed air:

- Pocket filter SFM.

During debagging process of bags with bulk materials like cement, large amount of dust is formed. Dedusting of this process requires usage of filters, with automatic cleaning of filtration elements, along with debagging system.



### Aspiration of silo towers

Applicable types of silo filters:

- Cartridge filter SFB with pulse regeneration;
- Pocket filter SFM with vibration cleaning.

Filters are used for aspiration of silos, loaded with bulk materials under pressure. Filters help protecting the environment by dumping the excessive pressure and letting the air from silo to pass through the filter.



## 4.1 INDUSTRIAL FILTERS



1

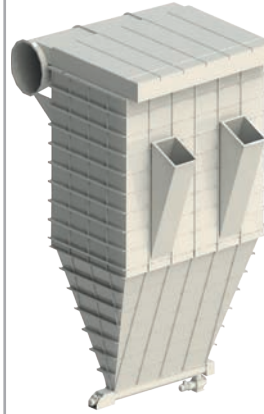
### SFN



Modular self-cleaning filters with flat pockets and pulse cartridge cleaning system by compressed air, suitable for continuous cleaning of air or gases from various types of dry, bulk dust as well as fiber and slightly sticky dust with initial concentration up to  $50 \text{ g/m}^3$ . Filtration surface area of single module is  $36$  to  $126 \text{ m}^2$ . Airflow capacity up to  $150.000 \text{ m}^3/\text{h}$ .

2

### SFS



Sleeve filter with pulse regeneration - classic and most commonly used type of filter for various types of applications. Required airflow capacity can be reached both by adding section and by battery assembly of several filters. Suitable for aspiration of gases with high concentration of dust (up to  $60 \text{ g/m}^3$ ). Designed for cleanign of large volumes of gases from  $15.000 \text{ m}^3/\text{h}$  to  $1,5-2,0 \text{ million m}^3/\text{h}$ .

3

### SFL



Multi purpose economical self-cleaning modular filters of continuous action with pulse regeneration by compressed air. Filtration elements are made in for of flat pleated cartridges. Filters are suitable for continuous operation at cleaning of air of gases from various types of dry bulk dust with initial concentration up to  $50 \text{ g/m}^3$ . Filtration surface area of single module is  $36$  to  $216 \text{ m}^2$ . Airflow capacity up to  $150.000 \text{ m}^3/\text{h}$ .

4

### SFM



Budgetary solution for various types of aspiration applications. Made in a form of one-piece semi-automatic pocket filters for noncontinuous operatino with filtration surface area from  $6$  to  $45 \text{ m}^2$  with mechanical shaking of filtration elements. Regeneration of filtration elements requires switching off the fan. Filter is used for cleaning the air or gases from dry, bulk, non sticky dust with concentratio up to  $5 \text{ g/m}^3$ . Airflow capacity up to  $16.000 \text{ m}^3/\text{h}$ .

5

## SFB

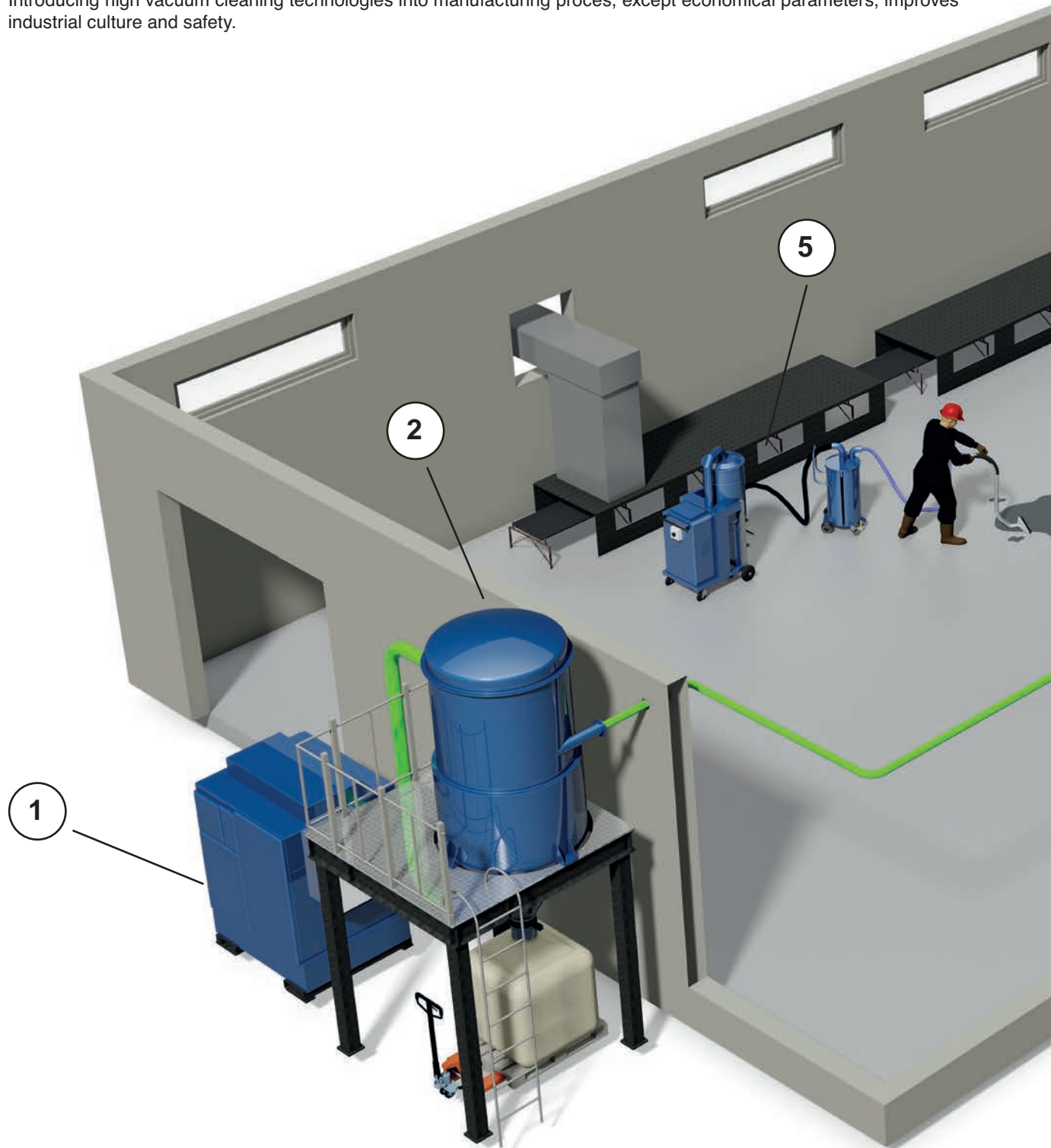


Economical solution for aspiration of silos, loaded under excessive pressure. Units are cylindrical one-piece self-cleaning modules of cartridge filters, intended for continuous operation. Default filtration material - polyester. Regeneration of filters is done by purge cleaning by compressed air. Filtration surface area is 15 to 27 m<sup>2</sup>. Dust concentration up to 20 g/m<sup>3</sup>. Airflow capacity up to 5.000m<sup>3</sup>/h.

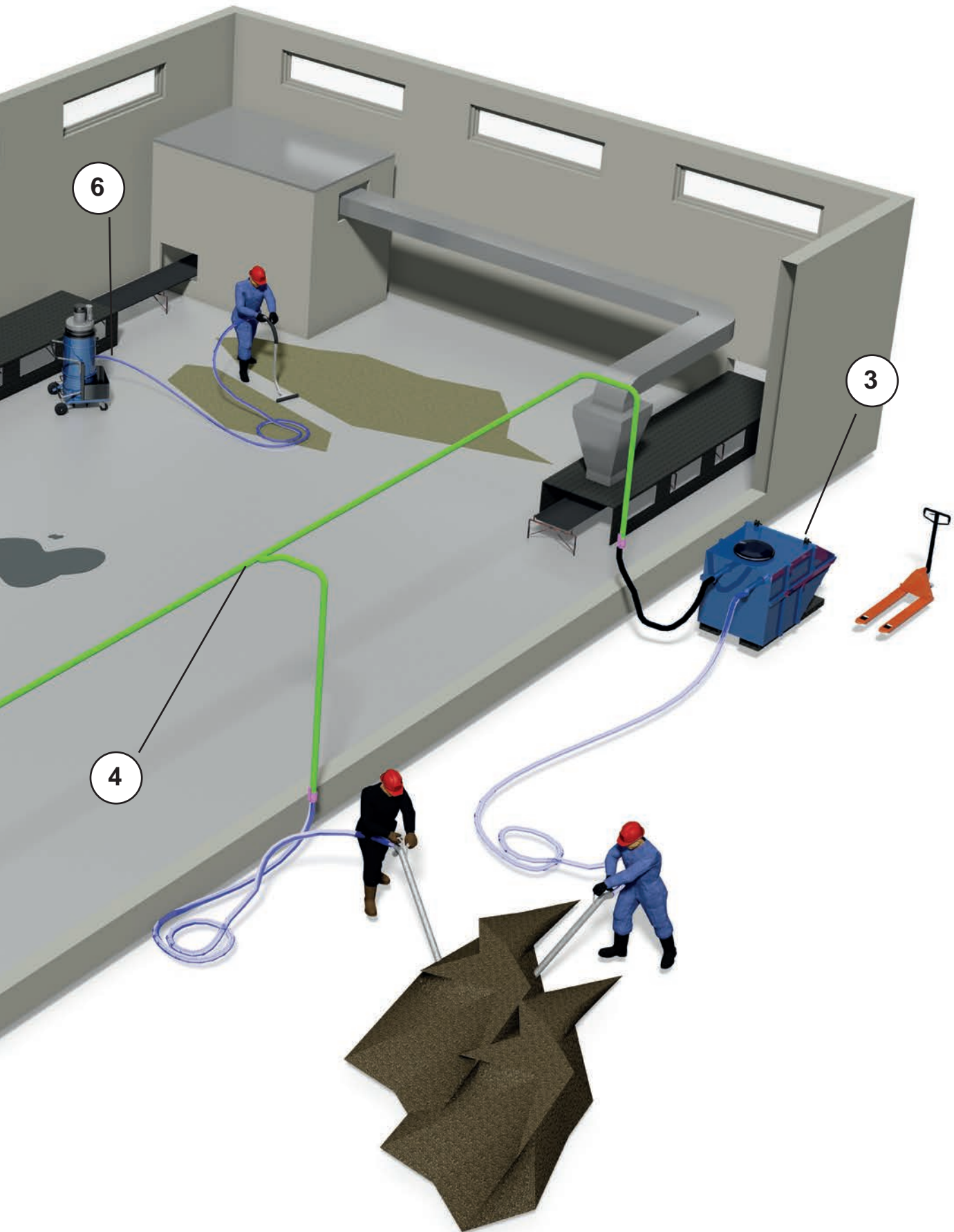
## 5. HIGH VACUUM DUST CLEANING SYSTEMS

High vacuum systems for dust cleaning help returning raw materials back into the industrial process, collect and localize dust spilled during loading, transportation, packing and other technological operations, in a fast and dust free way.

Introducing high vacuum cleaning technologies into manufacturing proces, except economical parameters, improves industrial culture and safety.







The numbers in the picture indicate the model range of devices, a brief description of which is presented on the pages:

38-39

# 5.1 STATIONARY HIGH VACUUM SYSTEMS



1

## VPR



Vacuum pump VPR, based on Roots pump, creates high vacuum, which allows providing required negative pressure and airflow in flexible hoses and duct lines. Pump with additional cooling line allows working with long duct lines (>200m) and is suitable for heavy "complicate" materials (specific weight > 2 t/m<sup>3</sup>). Airflow capacity from 875 m<sup>3</sup>/h to 2930 m<sup>3</sup>/h. Negative pressure – up to 50 kPa.

2

## SFV



Filter-separator SFV is a combined unit, providing gravitational precipitation of material, transported by vacuum system, in the hopper bin and cleaning of transported air. Cleaning of processed air is done by integrated pocket filter with pulse regeneration by compressed air. Airflow capacity from 1000 m<sup>3</sup>/h to 3400 m<sup>3</sup>/h. Negative pressure – 50 kPa.

3

## Preseparator



Preseparator volume is used as intermediate (preliminary) stage for collection of material before filter-separator. Collected material from preseparator is unloaded with the help of forklift truck to utilization.

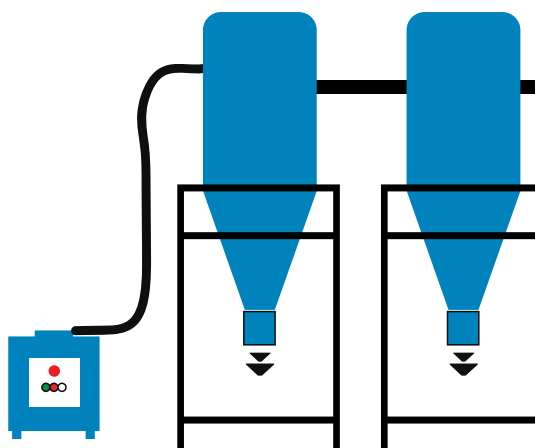
4

## Vacuum ducting system



Vacuum ducting system is build up over existing constructions of industrial facility. Simple duct connections allow fast dismantling of any part of ducting system for conduction of maintenance works.

### STATIONARY HIGH VACUUM SYSTEMS OF ASPIRATION AND DUST CLEANING Airflow capacity from 100 kg/h to 10 t/h



# UNIVERSAL INDUSTRIAL VACUUM CLEANER AND PRESEPARATOR

5



## Industrial vacuum cleaner with preseparator

Universal industrial vacuum cleaner with preseparator allows to significantly increase the range of collected materials, including collections of spills of non-explosive liquids.

6



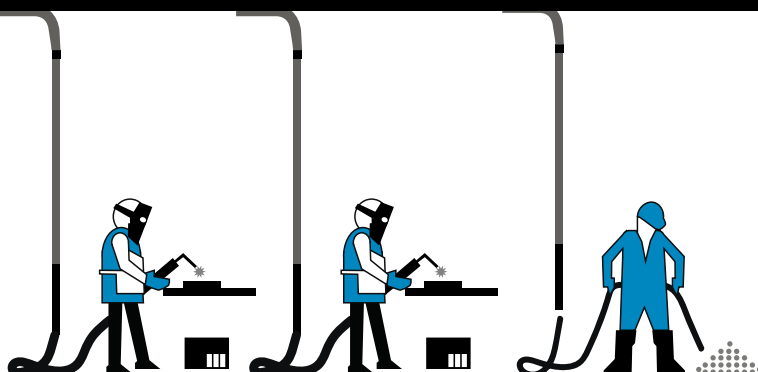
## Industrial vacuum cleaner

Universal industrial vacuum cleaner is intended for dedusting of technological processes or cleaning spillages of bulk materials.

## SPV



High vacuum filtration installation, intended for removal of welding fumes, grinding and polishing dust, metal chips, composite dust and any other abrasive particles. Unit is suitable for cleaning of work places of industrial facilities. Depending on the installation arrangement, several work places can be connected to one system. SPV can be equipped with separator (optional) for cleaning of bigger volumes of material or collection of complicated dusts.



## 6 GAS TURBINES FILTERS

SovPlym supplies filter for gas turbines (GTF) since 2015.

These filters are intended for cleaning the cycle air, which creates a flammable mixture after mixing with fuel, used in burning chambers of gas turbines (GT). Filters are installed in Complex Air Cleaning Device (CACD) at entrance to GT.

Usually, 3 cleaning stages are used:

- moisture separating filters, which capture moisture and coarse particles (class of filtration G2–G4 according to EN779-2014);
- rough filters (class of filtration G4–F7);
- fine filters (class of filtration F8–F9 and up to H12).

GT filters must correspond to special requirements:

- increased dust capacity at low resistance to airflow;
- high durability of filtration material;
- mechanical strength and wide operating temperature range of casing elements.

We offer solutions for 2 major market segments.



### Energy generating facilities

For large energy generating companies like power plants, using gas turbines with power of 30 MW and more, we offer following products:

- panel filters;
- pocket filters;
- compact filters;
- round and conical cartridge filters

(for accumulative CACD and ones with reverse purge cleaning systems with compressed air).



### Small energy stations and gas pumping stations

For small energy stations and gas pumping stations, using GT with power less than 30 MW, we offer combines filtration systems, made of modern materials and having number of patented technical solutions.

We offer best operational parameters:

- low resistance of the system to airflow at high dust capacity;
- significantly less chances for icing in conditions of low temperature;
- fast replacement of moisture separating filter at working turbine;
- increased life time before replacement.



# QUESTIONNAIRES

We create complex industrial equipment and systems, requiring individual approach, considering specific requirements. Therefore, we developed special questionnaires for each product line of our equipment.

You can fill out the questionnaire online or save it to your computer, fill it out and send us scanned copy at [info@sovplym.com](mailto:info@sovplym.com).

Choose required questionnaire at our web site [www.sovplym.ru](http://www.sovplym.ru)  
in «Documents» section  
or use QR-code below.



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