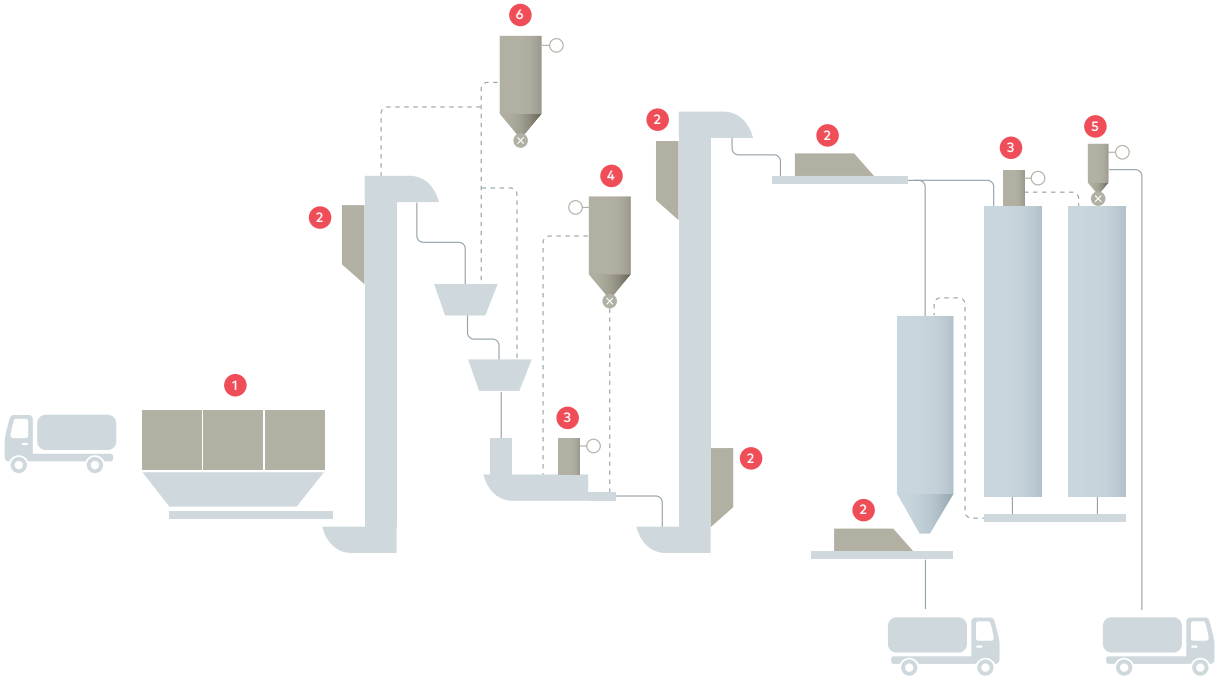
SIMATEK
Filter Technology

# Dust collection and aspiration filters

**An optimised investment.**
**Effectively delivered.**

# Dust collection and aspiration (DCA)

Simatek engineers and manufactures a wide range of pulse-jet bag filters designed to work with dust explosive atmosphere and meet international standards and certifications. We also supply turnkey aspiration systems, pneumatic conveying, and industrial central vacuum cleaning systems.



1 Intake-pit filter 2 Spot filter 3 Dome filter 4 5 High-capacity separator 6 Aspiration filter

## Industry requirements:

- Implementation according to ATEX EN 14491 and VDI 3673 directives.
- Capacity: from 3,1 to 435,6 m².
- Pressure shock resistance: from 0,64 to 2 bar.

**Application of our DCA filters**

Our solutions are customised to meet specific customer needs while being efficient, environmentally friendly and good value for money. You get:

- Quick return on investment.
- Optimal use of resources.
- Low operating costs (reduced maintenance costs + minimum downtime).

# Working with us

## It's about much more than a high performance filter

### Making a difference

At Simatek, we are air filtration experts. Although filters are often a smaller element of a larger solution, they play a key role in plant performance, employee safety, and protection of the environment. At Simatek, we take a holistic perspective. We engineer our products and solutions to provide maximum performance, while making sure they are also financially the best choice.

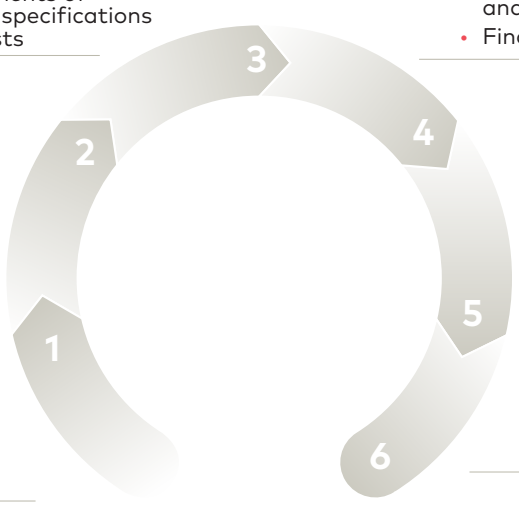
### Efficient and agile

While product performance is important, we appreciate that our customers are looking for more than an efficient solution. Meeting agreements and the ability to respond constructively to changing requirements during a build, is equally important for a successful project and partnership.

Every day, we work to be a partner to our customers – a partner with high quality products, who takes responsibility, drives the project forward, responds constructively to challenges, and contributes with knowledge and expertise to deliver the most cost-efficient solution. Our principles for collaborating with our customers secure that we obtain the necessary input at the right time in the process, to deliver to high standards.

With more than 10.500 filters under our belt, we have developed and refined our project execution model to allow us to be as lean and efficient as possible, but also to operate with agility when required by changing circumstances.

### Our project wheel




**1. Initial talks**
- First contacts
- Alignment of expectations

**2. Quotation**
- Client milestones
- Filter and project specification
- Pre-calculations and quotation

**3. Negotiations**
- Refinements of project specifications and costs

**4. Final contract**
- Order specifications
- Schedules and agreements
- Final order confirmation

**5. Delivery**
- Design
- Production and testing
- Delivery
- Supervision of installation
- Documentation

**6. Follow-up**
- After sales support
- Optimisation

# Applications for our DCA filters

## Recycling

**Industry challenges**

Recycling industrially manufactured products is a fast-growing industry and needs efficient and state-of-the-art filtration technologies.

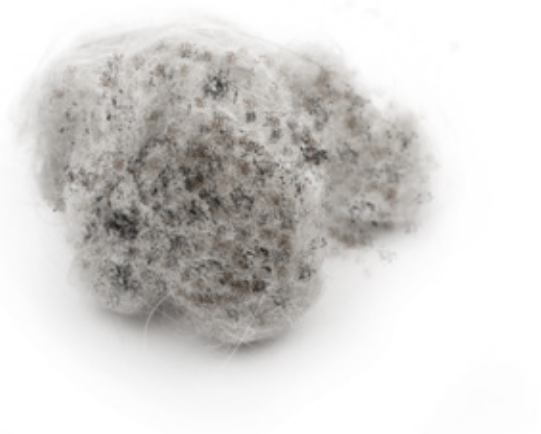
Simatek offers a range of filtration systems for a variety of applications in recycling and ensure a consistent output irrespective of the nature of the product. Our solutions help stabilise process reliability while improving the effectiveness of the recycling plants.

**Our approach**

We offer robust filtration systems for the recycling industry. Our solutions are based on a flexible modular design that is tailored to suit both existing and newly established recycling plants and work very effective.

**Our customers benefit from:**

- Improved processes and high productivity for different products.
- Assurance of sustained and improved final product quality.
- Improved working conditions for the operator.
- Low operating costs (reduced maintenance costs + minimum downtime).



## Biomass

**Industry challenges**

Producing alternative fuels calls for an ever-increasing variety of raw material and state-of-the-art filtration technologies.

The biomass industry needs solutions that can provide continuous and uniform sorting and filtration – and are designed to be installed in ATEX zones. Simatek solutions meet these requirements; they also prevent explosive emissions and dust leakage ensuring high process safety.

**Our approach**

Our filtration solutions are based on technology suited for multiple applications. This helps us offer our customers tailor-made solutions based on their specific needs.

Through our unique technology and specialised expertise, we guarantee optimal process quality.

**Our customers benefit from:**

- Improved performance.
- Assurance of sustained and improved final product quality.
- Improved working conditions.
- Optimal use of resources.

# Chemical

### Industry challenges

In the chemical industry, dust is generated due to the nature of the products being manufactured and their specific properties. This dust can be abrasive, chemically aggressive, explosive, fine or coarse.

The industry has to meet stringent regulatory and legal requirements in its production processes.
Simatek's filtration solutions have been developed in keeping with these specific needs.

### Our approach

Our filtration solutions are developed keeping in the mind the complexities involved in manufacturing chemical products.
We work with our customers to offer effective solutions that are suitable for their products while offering optimal performance, process and product quality.

### Our customers benefit from:

- Improved processes and high productivity.
- Assurance of sustained and improved final product quality.
- Improved working conditions.
- Optimal use of resources.

# Pet and fish food

### Industry challenges

Manufacturing high-quality food and food supplements for pisci-culture and pets requires an increasing variety in their composition and production processes.
Our filtration technology is suited to handle different processes. It ensures secure production areas, optimised processes and optimised product recovery while meeting the necessary quality requirements.

### Our approach

Simatek's filtration solutions are developed to meet the challenges and unique needs of the pet and fish food industry.
Based on our long-standing experience, we offer solutions with optimal results while offering customers good value for money.

### Our customers benefit from:

- Improved processes and high productivity.
- Assurance of sustained and improved final product quality.
- Improved working conditions.
- Optimal use of resources.

# Applications for our DCA filters

## Grain and feed

**Industry challenges**

Grain and feed products generate a high volume of dust during production. This presents a safety hazard for employees working in the plants and the equipment used.

Simatek offers solutions that meet the industry's needs in terms of health and safety, hygiene, product quality and product recovery – irrespective of the volume of dust generated.

**Our approach**

Our solutions are based on a flexible modular design with a wide range of applications.

We deliver efficiency and performance by developing customised solutions for our customers. In addition to being efficient, our solutions are environment friendly and offer customers good value for money.

**Our customers benefit from:**

- Improved processes and high productivity.
- Improved working conditions.
- Optimal use of resources.
- High product recovery.

## Fertiliser

**Industry challenges**

Producing and processing organic and inorganic fertilisers requires extensive safety measures – to protect equipment from destructive corrosion due to the chemical properties of such products. Simatek provides filtration solutions that are specially designed to be used for aggressive and corrosive products.

**Our approach**

We develop customised solutions keeping in the mind the nature of the products manufactured in the fertiliser industry.

Filters that come in contact with the products are made of special material that can handle the chemically aggressive nature of these products. This ensures longer lifetime for both the manufacturing equipment and the filters.

**Our customers benefit from:**

- Improved processes and high productivity.
- Assurance of sustained and improved final product quality.
- Improved working condition.

# Mineral resources

**Industry challenges**

Mining stones, gravel and minerals calls for high-tech filtration solutions. These solutions protect employees and equipment from the harmful effects of being exposed to these minerals. Our filtration systems are also particularly resistant to abrasive materials. They filter the dust released in the ambient air, protecting the equipment from wear and tear and giving them longer lifetime.

**Our approach**

Simatek filtration systems offer a high degree of flexibility through their modular design and wide range of applications. Compact and robust, they are designed to work well in harsh conditions.

**Our customers benefit from:**

- Improved processes and high productivity.
- Assurance of sustained and improved final product quality.
- Improved working conditions.

# Food

**Industry challenges**

The food industry is subject to stringent hygienic requirements. This makes state-of-the-art filtration solutions a must in their production processes. Simatek filtration systems offer the food industry optimised product recovery while helping control flammable emissions and unwanted dust deposits.

**Our approach**

We design and develop customised filtration solutions for the food industry – including filters made exclusively from food-safe material. They are designed and manufactured according to EHEDG hygiene and food guidelines.

**Our customers benefit from:**

- Easy and efficient cleaning that meet high hygienic standards.
- High product recovery.
- Improved processes and high productivity.
- Assurance of sustained and improved final product quality.
- Improved working conditions.

# Documentation and quality

## Comprehensive documentation that meets compliance standards and covers the entire project management process

### Documentation

With increasing legal requirements, we have experienced an increasing demand for ever more detailed documentation. At Simatek, we continuously adapt and develop our documentation to meet both official legal standards and specific customer requirements.

Documentation is an integral part of our project management process – from the initial quote to delivery and installation of the filtration system. As part of our documentation, we provide product and component descriptions, technical specifications, safety and compliance information and user guides for installation, configuration and maintenance.

We work with our customers during the initial quotation phase to understand their specific documentation needs. This is written into the final contract and the full documentation is delivered to the customer at project completion.

**CE marking**

For the enduser to achieve the CE marking, our filters are delivered with an IIB declaration in accordance with machine directive 2006/42/EC. Further to this Simatek can offer the preparation of the IIA declaration of conformity for the entire Simatek delivery.

### Standards and certificates

Simatek has received several certificates endorsing our ability to meet and deliver solutions according to various compliance standards and directives. Our dust collection and aspiration filters and the accompanying equipment meet the following standards and EU directives where relevant and applicable:

**Certificates**

- TÜV VDI 2263 part 3 compliance certification mandated by TÜV NORD CERT.
- Declarations of Conformity of the EurAsEC Costums Union to Technical Requirements.
- Declaration of conformity to the Technical Regulations of Ukraine.
- Inspecta certified permission to re-stamp material used for producing pressure resistant filters.

**Directives**

- ATEX Directive 2014/34/EU.
- Machinery Directive 2006/42/EC.
- Directive 2014/68/EU Pressure Equipment Directive (PED).
- Directive 2014/29/EU for simple pressure vessels.
- Low Voltage Directive 2014/35/EU.
- EMC Directive 2014/30/EU.

SIMATEK

# After sales services

## Ensuring high filter performance during its entire lifetime

### Service solutions

**Round-the-clock global service, that keeps your operations running smoothly with minimum downtime**

**Through our service and maintenance support, we offer:**

- Supervision for installation and overhaul.
- Regular service inspections and preventive maintenance services.
- On-site troubleshooting.
- 24-hour technical service support via our hotline.
- Commissioning services.
- Support and maintenance contracts.

### Original spare parts

**an assurance of quality parts that fit your Simatek solution and serve you for years**

**When you choose original Simatek spare parts, you get:**

- A wide range of spare parts that are always in stock.
- Products that are easy to use and of high quality.
- 24-hour technical service support via our hotline.
- Solutions tailored to meet your needs.
- Detailed and easy-to-use user manuals with comprehensive spare parts documentation.

### Filter bag and filter cage technology

**that delivers a perfect fit between filter bags and filter cages while offering optimal cleaning**

At Simatek, we work with the best technology in all our offerings. We have long-standing experience in filter bag technology and our filter cages are designed to ensure optimal performance and easy maintenance.

We offer solutions that match your individual needs. Combined with our technical expertise, support and reliable documentation, you're assured of the best.

### Filter baghouse accessories

**that ensure a high utilisation ratio on your filtration systems**

As a part of the original Simatek installation package, we supply several accessories for our filter baghouse.

We stock a large number of spare parts for these accessories as well as complete units for quick replacements and larger retrofit solutions.

### Retrofit solutions

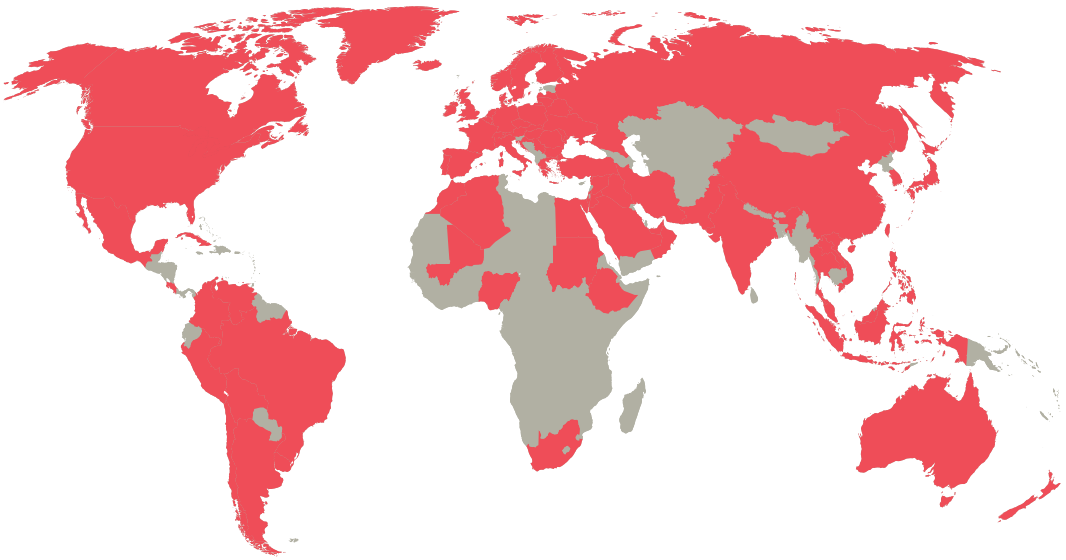
**that improve performance and extend the life of your filters**

**Our retrofit solutions keep your filtration systems up to date when it comes to:**

- Functionality.
- Efficiency.
- Capacity.
- Legal requirements to meet environmental standards.
- New standards in line with plant upgrades.
- Ensuring an ergonomic working environment.
- Legal requirements to meet Work Place Hazards standards, especially in the field of ATEX conformity.

For more information on our services offerings, go to www.simatek.com or call +45 5854 1596 for advice from our experts.

# Simatek at a glance



**35+**
years of experience

**10.500+**
filters installed in more than 80 countries

## Air filtration specialists

With more than 10.500 Simatek filters installed around the world, we can confidently say we have the skills and expertise to deliver projects to high standards. With our dedicated team of 50 employees we efficiently move projects from contract and design to delivery, almost anywhere in the world.

# An optimised investment. Efficiently delivered.

Founded in 1981, Simatek is a leading manufacturer of industrial air filtration solutions. Our high-tech products and systems optimise footprint, performance and maintenance for industrial plants worldwide. All at a low cost of ownership.

Our main areas of expertise:

- Dust collection and aspiration: A wide range of pulse-jet bag filters designed to work with dust explosive atmosphere and meet international standards and certifications.

- Process air: Simatek engineers and manufactures sanitary bag filters according to the requirements of the food and dairy industry – including process filters with Cleaning In Place (CIP) and super sanitary bag filters approved according to the USDA and with 3-A symbol certification.

Unique technology and specialised expertise are at the heart of everything we do at Simatek. Our core team of dedicated employees – alongside our global network of partners and representatives – are ready to help you find the solution that will benefit your business the most.

We call this an optimised investment, effectively delivered.

SIMATEK
Filter Technology

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# SimPact 4T-R pulse jet filter

## A cost-efficient, robust solution that gives you the benefit of high productivity and savings

The SimPact 4T-R filter has a compact, cylindrical design and an efficient pulse-jet cleaning system. The filter housing and inlet zone are strategically placed in the various construction forms. This ensures a smooth flow of both coarse and fine particles into the filter.

### Benefits

**Efficiency**

- The pulse jet system automatically cleans the bags row-by-row even as the dust is being filtered. The advantage is that the filter continues to work for you while the bags are being cleaned.

**Savings**

- Being a low maintenance solution, the SimPact 4T-R needs minimum downtime. This means continuous plant operations for you.
- The filter control system helps maintain a low pressure drop – helping you save both compressed air and energy.

**Flexibility**

- You can separate almost any kind of dust – fine, abrasive or explosive.
- The flexibility in bag removal allows you to easily service the bags.

### Features

- Capacity: 500 – 130.000 m³/h
- Filter size: 3,1 – 435,6 m² filter surface
- Standard 5% vacuum
- Pressure shock resistance: Up to 2,0 bar
- Works on both dry and sticky products
- Bag removal: via both clean and dirty air sides
- Complying with the ATEX directive
- Indoor installation with explosion vent following European standard EN14491 or the German guidelines VDI 3673

### Construction forms

| **Inlets:** | **Top:** |
|---|---|
| 03 + 3 WB | 4T-R |
| 04 | 4T1-R |
| 05 | 4T2-R |
| 12 (high capacity) | 4T3-R |
| 14 (high capacity) | |
| 17 + 17 WB (high capacity) | |

### Applications

- Grain and feed industry
- Chemical industry
- Cement industry
- Food industry
- Brewery
- Paper industry
- Plastics industry
- Metal industry
- Fish feed industry
- Pet-food industry
- Recycling industry
- Wood industry
- Mineral industry
- Fertiliser industry

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# SimPact 4T-R pulse jet filter

*Subject to alterations*

## Selecting filter size

SimPact® 4T-R — Filter area m²

| Type JM | | 7 | 10 | 14 | 21 | 32 | 41 | 52 | 70 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|
| Bag length - dm | **10** | 3,1 | 4,4 | 6,2 | 9,2 | 14,1 | 18,0 | 22,9 | 30,8 | 39,6 |
| | **15** | 4,6 | 6,6 | 9,2 | 13,9 | 21,1 | 27,0 | 34,3 | 46,2 | 59,4 |
| | **20** | 6,2 | 8,8 | 12,3 | 18,5 | 28,1 | 36,1 | 45,7 | 61,6 | 79,2 |
| | **25** | - | 11,0 | 15,4 | 23,1 | 35,2 | 45,1 | 57,2 | 77,0 | 99,0 |
| | **30** | - | 13,2 | 18,5 | 27,7 | 42,2 | 54,1 | 68,6 | 92,4 | 118,8 |
| | **35** | - | 15,4 | 21,6 | 32,3 | 49,3 | 63,1 | 80,0 | 107,8 | 138,5 |
| | **40** | - | - | - | 36,9 | 56,3 | 72,1 | 91,5 | 123,2 | 158,3 |
| | **45** | - | - | - | 41,6 | 63,3 | 81,1 | 102,9 | 138,5 | 178,1 |
| | **50** | - | - | - | 46,2 | 70,4 | 90,2 | 114,4 | 153,9 | 197,9 |

For larger filter sizes, please contact Simatek's sales department

## Selecting construction form

| 03 and 03 WB* | 04 | 05 | 12 | 14 | 17 and 17 WB* |
|---|---|---|---|---|---|
| | | | | | |
| Dust load: | | | | | |
| <50 g/m³ | <50 g/m³ | <50 g/m³ | <1000 g/m³ | <100 g/m³ | Unlimited |

**) Wide-Body*

## Selecting the top cover for the clean-air chamber

4T-R

- *Pressure-shock resistant*
- *Side Removal*
- *Installation of bags through the mandoor*

4T1-R

- *Non-pressure shock resistant*
- *Top Removal*
- *Installation of bags from the clean-air side*

4T2-R

- *Pressure-shock resistant top with hinged cover*
- *Top Removal*
- *Installation of bags from the clean-air side*

4T3-R

- *Pressure-shock resistant "Walk in plenum" (Penthouse)*
- *Top Removal*
- *Installation of bags from the clean-air side*

# SimSpot spot filter

## A miniature bag filter suitable both as a stand-alone solution and as an extension to central aspiration plants

The SimSpot miniature bag filter is a practical alternative to conventional central aspiration. Its simple, functional design allows it to be easily installed on conveyors and bucket elevators.

### Benefits

**Savings**

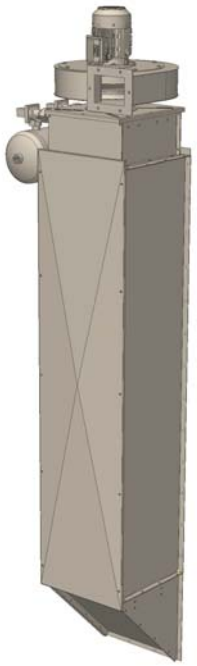
- The SimSpot filter with the built-in fan is in action only when the machine is working – giving you energy savings and your filter bags a long life.
- The SimSpot filter is also available without a built-in fan. This means that you can connect it to a large central fan to save energy.
- Being a low-cost and low-maintenance solution, the SimSpot filter offers you savings in the form of a low-cost of ownership.

**Flexibility**

- The SimSpot filter is suitable both as stand-alone solution and as an extension to central aspiration plants. You choose the option best suited to your needs.
- New machines that need dust aspiration are equipped with separate SimSpot filters. This means that you don't experience any interference with existing aspiration systems.

**Safety**

- In the event of a fire in a machine with a built-in SimSpot, the filter does not act as a connecting link to other machines. This gives your machines and plant an additional level of safety



### Features

**Ease of use**

- Automatic pulse-jet cleaning
- Easy change of filter bags through a large inspection door
- Can be connected to a large central fan
- Simplified control of the aspiration system.

**Effective design**

- Built-in fan to automatically adjust the quantity of aspiration air depending on the extent of the leak to regulate automatic cleaning
- Large suction intake with low admission speed to minimise turbulence and circulation of dust
- An electric control unit with adjustable pulse and pause time

### Sizes

JM 3/-
JM 6/-
JM 15/-

### Applications

- Grain and feed industry
- Chemical industry
- Cement industry
- Food industry
- Brewery
- Paper industry
- Plastics industry
- Metal industry
- Fish feed industry
- Pet-food industry
- Recycling industry
- Wood industry
- Mineral industry
- Fertiliser industry

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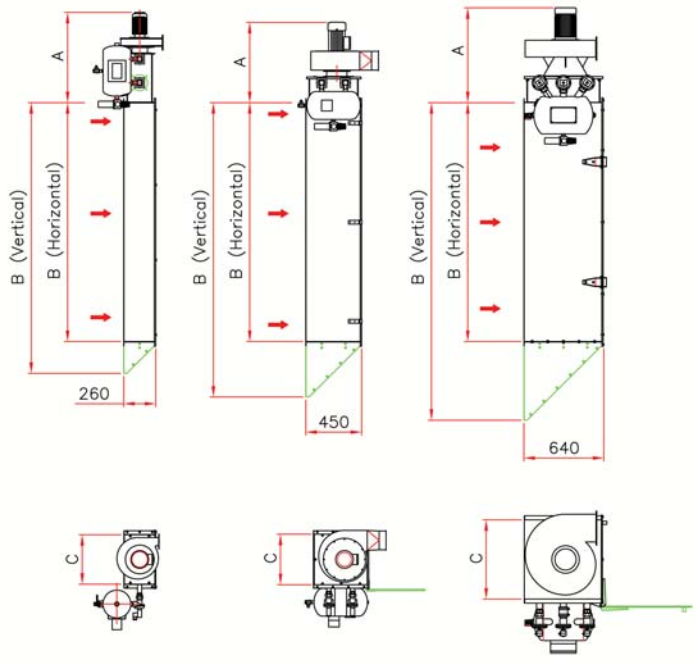
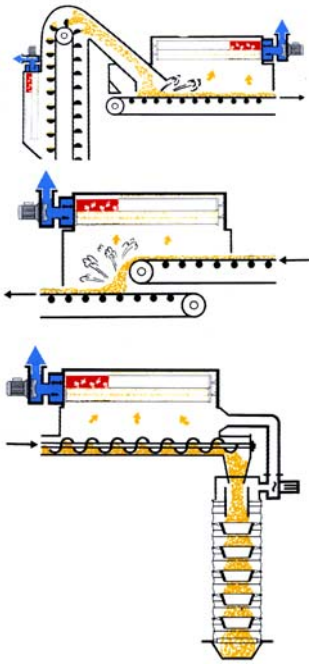
*Subject to alterations*

## SimSpot is available in different executions

| - 2 mm galvanized plate<br>- 2 mm stainless steel<br>- 2 mm galvanized plate, powder-coated | | | | | | | | | Dimensions mm | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Filter type | No. of bags qty. | Bag length dm | Filter area m² | Compr.air consumpt. Nl/min.*) ** | Weight without fan kg | Weight with fan kg CPS/ R1 | CPS/ R1,5 | DCT 1/DCT 2/DCT 3/DCT 4 | A | B Vertical Inlet | B Horizon-tal Inlet | C |
| JM 3/14 | 3 | 14 | 1,5 | 20 | 62 | 93 | 95 | - | 725 | 1644 | 1414 | 396 |
| JM 6/14 | 6 | 14 | 2,9 | 35 | 85 | 116 | 118 | 131 | 640 | 1834 | 1414 | 406 |
| JM 6/19 | 6 | 19 | 4,0 | 35 | 100 | 131 | 133 | 146 | 650 | 2334 | 1914 | 406 |
| JM 6/24 | 6 | 24 | 5,1 | 40 | 115 | 146 | 148 | 161 | 700 | 3024 | 2414 | 406 |
| JM 15/14 | 15 | 14 | 7,4 | 100 | 157 | - | - | 203/212/233 | 700 | 2024 | 1414 | 646 |
| JM 15/19 | 15 | 19 | 10,0 | 100 | 182 | - | - | 228/244/258/288 | 760 | 2524 | 1914 | 646 |
| JM 15/24 | 15 | 24 | 12,6 | 140 | 215 | - | - | 253/269/283/313 | 790 | 3024 | 2414 | 646 |

**) Estimated figures, depending on the type of dust and the filter load (compressed-air quality acc. to ISO 8573 Class 3.*
***) According to standard settings on the control for each filter size.*



# SimSpot (PSR) spot filter with pressure-shock resistance of 0.7 bar

SIMATEK Filter Technology

## A miniature bag filter suitable both as a stand-alone solution and as an extension to central aspiration plants

The SimSpot PSR miniature bag filter is a practical alternative to conventional central aspiration. Its simple, functional design allows it to be easily installed on conveyors and bucket elevators.

### Benefits

**Savings**

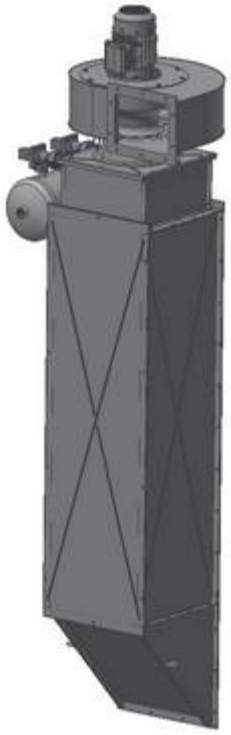
- The SimSpot PSR filter with the built-in fan is in action only when the machine is working – giving you energy savings and your filter bags a long life.
- The SimSpot PSR filter is also available without a built-in fan. This means that you can connect it to a large central fan to save energy.
- Being a low-cost and low-maintenance solution, the SimSpot filter offers you savings in the form of a low-cost of ownership.

**Flexibility**

- The SimSpot PSR filter is suitable both as stand-alone solution and as an extension to central aspiration plants. You choose the option best suited to your needs.
- New machines that need dust aspiration are equipped with separate SimSpot PSR filters. This means that you don't experience any interference with existing aspiration systems.

**Safety**

- In the event of a fire in a machine with a built-in SimSpot PSR, the filter does not act as a connecting link to other machines. This gives your machines and plant an additional level of safety
- SimSpot PSR has a pressure shock resistance of 0.7 bar



### Features

**Ease of use**

- Automatic pulse-jet cleaning
- Easy change of filter bags through a large inspection door
- Can be connected to a large central fan
- Simplified control of the aspiration system.

**Effective design**

- Built-in fan to automatically adjust the quantity of aspiration air depending on the extent of the leak to regulate automatic cleaning
- Large suction intake with low admission speed to minimise turbulence and circulation of dust
- An electric control unit with adjustable pulse and pause time

### Sizes

JM 6/-

### Applications

- Grain and feed industry
- Chemical industry
- Cement industry
- Food industry
- Brewery
- Paper industry
- Plastics industry
- Metal industry
- Fish feed industry
- Pet-food industry
- Recycling industry
- Wood industry
- Mineral industry
- Fertiliser industry

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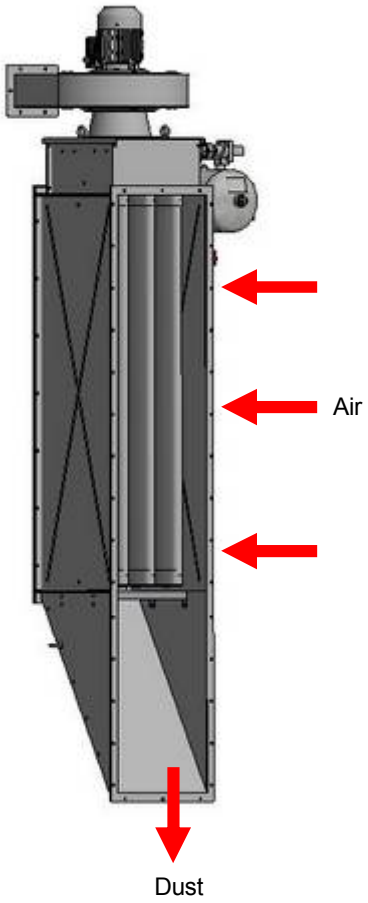
# SimSpot (PSR) spot filter with pressure-shock resistance of 0.7 bar

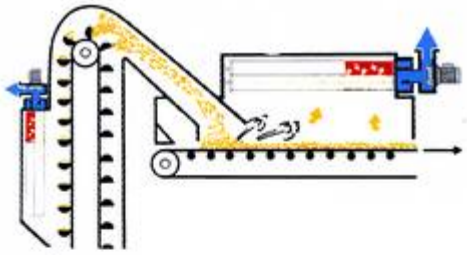
SIMATEK Filter Technology

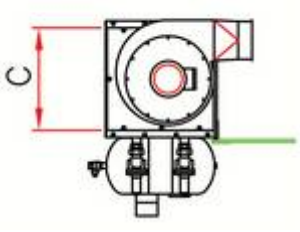
## SimSpot PSR is available in different executions

| - 2 mm galvanized plate<br>- 2 mm stainless steel<br>- 2 mm galvanized plate, powder coated | | | | | | | | | | Dimensions [mm] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Filter-type | Number of bags | Bag-length [dm] | Filter-area [m²] | Compressed air consumption [Nl/min]*) ** | Weight, without fan [kg] | Weight including fan [kg] | | | | A | B Vertical inlet | C |
| | | | | | | CPS/R1 | DCT1 | DCT3 | DCT4 | | | |
| JM 6/14 PSR | 6 | 14 | 2,9 | 35 | 105 | 136 | 151 | 173 | 197 | 1060 | 2137 | 455 |
| JM 6/19 PSR | 6 | 19 | 4,0 | 35 | 129 | 160 | 175 | 197 | 221 | 1060 | 2637 | 455 |
| JM 6/24 PSR | 6 | 24 | 5,1 | 35 | 162 | 193 | 208 | 254 | 254 | 1060 | 3137 | 455 |

**) Estimated figures, depending on the type of dust and the filter load (compressed-air quality acc. to ISO 8573 Class 3.*
***) According to standard settings on the control for each filter size.*





# SimPit pit intake aspiration

## A flexible modular filtration system tailored to suit both existing and newly established intake aspiration pits.

The SimPit Intake-pit aspiration filter is designed as a flexible modular system. It is designed and built as a wall that can be customised to suit both existing and newly established intake aspiration pits.

SimPit Intake-pit filter with large air volume is the most effective filter for crane hoppers for ship, truck or wagon unloading.

### Benefits

**Savings**

- As the fan can be fitted directly next to the filter, energy consumption can be minimized.
- With the SimPit's simple and inexpensive mounting process, you don't waste any resources during the initial installation process.

**Flexibility**

- Its versatility allows you to choose the option best suited to your needs.
- It can be adapted to fit any size of intake pit

### Features

- Flexible modular design
- Easy to install
- Automated cleaning system
- No dust transport
- Low pressure drop
- No rotary valves needed

### Sizes

JM 16/-
JM 20/-
JM 24/-

### Applications

- Grain and feed industry
- Chemical industry
- Cement industry
- Food industry
- Brewery
- Paper industry
- Plastics industry
- Metal industry
- Fish feed industry
- Pet-food industry
- Recycling industry
- Wood industry
- Mineral industry
- Fertiliser industry

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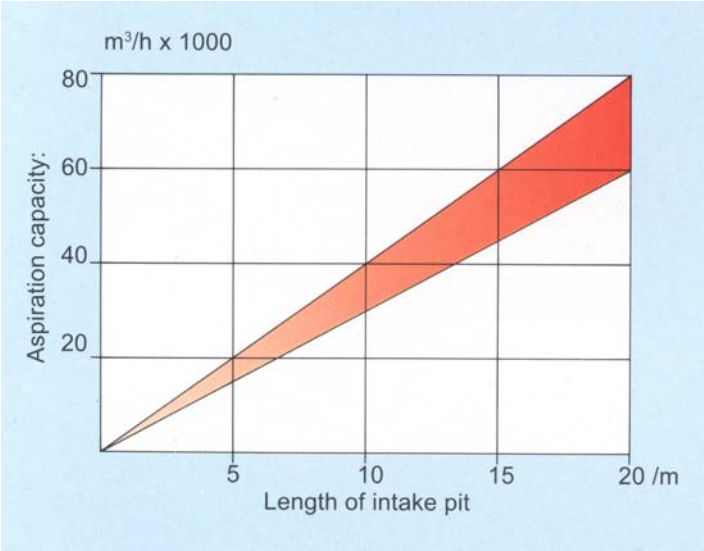
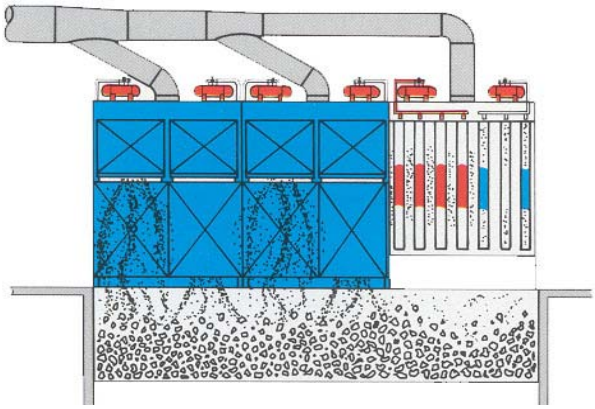
# SimPit pit intake aspiration

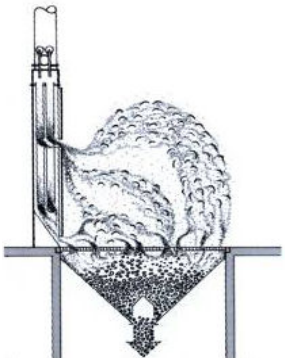
*Subject to alterations*

## Dimensioning of airflow




## Flexible Modular System





Filter area m²

Bag length, dm

| | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|
| **JM 16/-** | 10,6 | 14,0 | 17,6 | 21,1 | 24,6 |
| **JM 20/-** | 13,2 | 17,5 | 22,0 | 26,4 | 30,8 |
| **JM 24/-** | 15,8 | 21,0 | 26,4 | 31,7 | 37,0 |

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# Central Vacuum Cleaning System

SIMATEK Filter Technology

## An efficient aspiration system that handles bulk dust loads and creates a safe, clean working environment

Simatek central vacuum cleaning system ensures
a well dimensioned aspiration system that performs efficiently.
It helps create a safe, clean working environment with optimal work conditions.

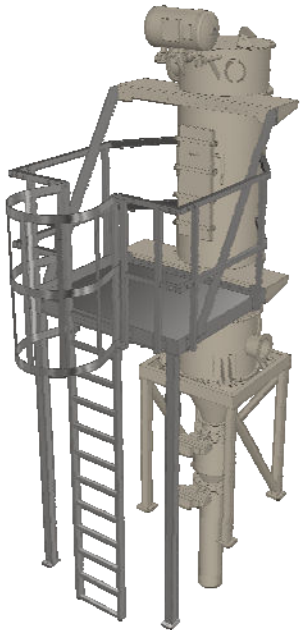
We provide different types of ducts – mild steel or stainless steel – that are assembled with easy-to-detach pipes.

### Benefits

**Efficiency**
- A clean working environment with reduced noise and vibration means that the employees can work efficiently and without distractions.

**Safety**
- For plants operating with explosive dust, Simatek central vacuum cleaning system's quick and efficient cleaning ensures a safe working environment.

**Savings**
- Dusty and unsafe work environments can make the staff ill. With our central vacuum cleaning system a clean and safe working environment can be ensured and avoid losses due to a high number of sick days.



### Features

**Ease of use**
- Easy to operate
- Quick and efficient cleaning
- Adaptable to different dust types

**Effective design**
- Sufficient suction capacity to handle bulk dust loads
- No circulation of air
- Low emissions

**Standards**
- TÜV approved following German standard VDI2263
- Applying with ATEX Directive
- High level of documentation

### Construction forms

**Inlets**
17 - radial inlet with baffle plates

**Top**
4T-R – flat top cover, installation/change of bags through mandoor

4T2-R - hinged top cover, installation/change of bags from the clean-air side

### Applications

- Grain and feed industry
- Chemical industry
- Cement industry
- Food industry
- Brewery
- Paper industry
- Plastics industry
- Metal industry
- Fish feed industry
- Pet-food industry
- Recycling industry
- Wood industry
- Mineral industry
- Fertiliser industry

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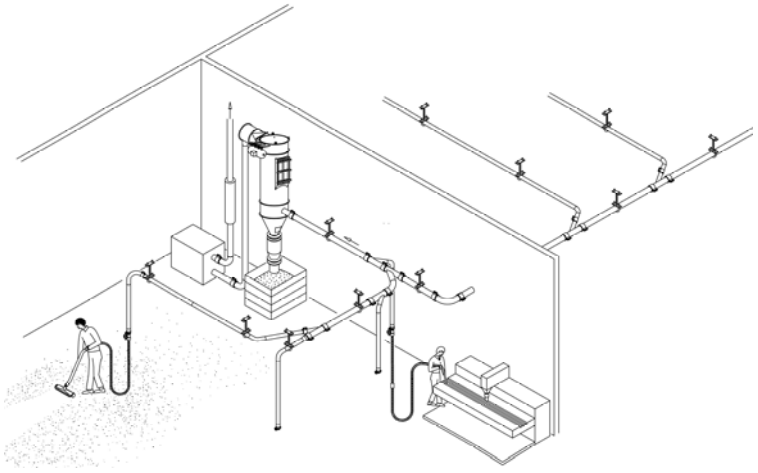
# Central Vacuum Cleaning System

## Dimensioning

SimVac is dimensioned from 3 to 110 kW, depending on capacity and application.



Information required for quotation for central vacuum cleaning system.

**Company** **Contact person:**

**E-mail** **Tel. no.**

| | | | |
|---|---|---|---|
| 1. | Name of project | | |
| 2. | Total number of suction points | | pcs. |
| 3. | Number of suction points in concurrent operation | ø38 mm<br>ø50 mm | pcs. (cleaning of machinery)<br>pcs. (floor cleaning) |
| 4. | Max. distance from the filter to the farthest suction point | | m |
| 5. | Product / type of dust | | |
| 6. | Number of storeys | | |
| 7. | In case of more than one storey, please inform at which storey the filter is to be installed | | |
| 8. | How will dust collection after the filter take place | Box<br>Big-bag | Dust bin<br>Trough conveyor |
| 9. | Explosion venting of the filter | Yes:<br>$K_{St}$ value: | No:<br>$P_{max}$ value: |

To be returned to office@simatek.dk

# Central Aspiration System

## In the field of dusty bulk handling, an efficient aspiration system is essential

Choosing a complete filter system for aspiration, provides you with a uniq comprising filter, fan, emptying system, piping and suitable ATEX components for explosive atmospheres.

Simatek has long experience and expertise in designing the exact technical solution satisfying the actual customer requirements.

### Benefits

**Efficiency**
- Buying both filters and key components from Simatek, places the responsibility of the functionality with us as supplier.
- The complete system meets various standards and directives, among others the Machinery and ATEX directives.

**Safety**
- For plants operating with explosive dust, Simatek's central aspiration system ensures a safe working environment.

**Savings**
- Energy efficient conveying system with long lifetime on bags and low emission.

### Features

**Efficiency**
- Excellent capacity in handling bulk dust loads
- Removes dust from the environment
- No recirculation of air
- Low dust emission reduces the potential of dust explosion

### Construction forms

| Inlets | Top |
|---|---|
| 03 + 03 WB* | 4T-R |
| 04 | 4T1-R |
| 05 | 4T2-R |
| | 4T3-R |

### Applications

- Grain and feed industry
- Chemical industry
- Cement industry
- Food industry
- Brewery
- Paper industry
- Plastics industry
- Metal industry
- Fish feed industry
- Pet-food industry
- Recycling industry
- Wood industry
- Mineral industry
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## Selecting filter size

SimPact® 4T-R — Filter area m²

| Type JM | | 7 | 10 | 14 | 21 | 32 | 41 | 52 | 70 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|
| Bag length - dm | **10** | 3,1 | 4,4 | 6,2 | 9,2 | 14,1 | 18,0 | 22,9 | 30,8 | 39,6 |
| | **15** | 4,6 | 6,6 | 9,2 | 13,9 | 21,1 | 27,0 | 34,3 | 46,2 | 59,4 |
| | **20** | 6,2 | 8,8 | 12,3 | 18,5 | 28,1 | 36,1 | 45,7 | 61,6 | 79,2 |
| | **25** | - | 11,0 | 15,4 | 23,1 | 35,2 | 45,1 | 57,2 | 77,0 | 99,0 |
| | **30** | - | 13,2 | 18,5 | 27,7 | 42,2 | 54,1 | 68,6 | 92,4 | 118,8 |
| | **35** | - | 15,4 | 21,6 | 32,3 | 49,3 | 63,1 | 80,0 | 107,8 | 138,5 |
| | **40** | - | - | - | 36,9 | 56,3 | 72,1 | 91,5 | 123,2 | 158,3 |
| | **45** | - | - | - | 41,6 | 63,3 | 81,1 | 102,9 | 138,5 | 178,1 |
| | **50** | - | - | - | 46,2 | 70,4 | 90,2 | 114,4 | 153,9 | 197,9 |

For larger filter sizes, please contact Simatek's sales department

## Selecting the construction form

| 03 and 03 WB* | 04 | 05 |
|---|---|---|
| | | |

Dust load:

| | | |
|---|---|---|
| <50 g/m³ | <50 g/m³ | <50 g/m³ |

## Selecting the top cover for the clean-air chamber

| 4T-R | 4T1-R | 4T2-R | 4T3-R |
|---|---|---|---|
| | | | |
| • *Pressure-shock resistant*<br>• *Side Removal*<br>• *Installation of bags through the mandoor* | • *Non-pressure shock resistant*<br>• *Top Removal*<br>• *Installation of bags from the clean-air side* | • *Pressure-shock resistant top with hinged cover*<br>• *Top Removal*<br>• *Installation of bags from the clean-air side* | • *Pressure-shock resistant "Walk in plenum" (Penthouse)*<br>• *Top Removal*<br>• *Installation of bags from the clean-air side* |

# Pneumatic Conveying System

## A pneumatic conveying system transports products such as grain, powder and other dry materials through a piping system

By pressure transport system, Simatek provides a suitable filter flange-to-flange. The filter is working as a receiving filter.
We recommend filter with a fan to avoid over-pressure in the filter.

By vacuum conveying system, Simatek provides a complete system comprising filter, pump, discharge system, piping and suitable ATEX components for explosive atomospheres.

### Benefits

**Efficiency**
- Buying both filters and key components from Simatek, places the responsibility of the functionality with us as supplier.
- The complete system meets various standards and directives, among others the Machinery and ATEX directives.

**Flexibility**
- Unlike conveyers and elevators, the small duct systems allow you to move high product quantities quickly and/or between different levels.

**Savings**
- Energy efficient conveying system with long lifetime on bags and low emission.

### Features

**Vacuum conveying**
- Differential pressure: up to 0,5 bar
- Moderate duct length
- One or more intake points
- Single discharge point
- Dust-free product intake

**Pressure conveying**
- Differential pressure: more than 0,5 bars
- Long duct length
- Single intake point
- Several discharge points

### Construction form

**Inlets**:
17 + 17 WB

**Top**:
4T-R
4T1-R
4T2-R
4T3-R

### Applications

- Grain and feed industry
- Chemical industry
- Cement industry
- Food industry
- Brewery
- Paper industry
- Plastics industry
- Metal industry
- Fish feed industry
- Pet-food industry
- Recycling industry
- Wood industry
- Mineral industry
- Fertiliser industry

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## Selecting filter size

SimPact® 4T-R — Filter area m²

| Type JM | | 7 | 10 | 14 | 21 | 32 | 41 | 52 | 70 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|
| Bag length - dm | **10** | 3,1 | 4,4 | 6,2 | 9,2 | 14,1 | 18,0 | 22,9 | 30,8 | 39,6 |
| | **15** | 4,6 | 6,6 | 9,2 | 13,9 | 21,1 | 27,0 | 34,3 | 46,2 | 59,4 |
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| | **25** | - | 11,0 | 15,4 | 23,1 | 35,2 | 45,1 | 57,2 | 77,0 | 99,0 |
| | **30** | - | 13,2 | 18,5 | 27,7 | 42,2 | 54,1 | 68,6 | 92,4 | 118,8 |
| | **35** | - | 15,4 | 21,6 | 32,3 | 49,3 | 63,1 | 80,0 | 107,8 | 138,5 |
| | **40** | - | - | - | 36,9 | 56,3 | 72,1 | 91,5 | 123,2 | 158,3 |
| | **45** | - | - | - | 41,6 | 63,3 | 81,1 | 102,9 | 138,5 | 178,1 |
| | **50** | - | - | - | 46,2 | 70,4 | 90,2 | 114,4 | 153,9 | 197,9 |

For larger filter sizes, please contact Simatek's sales department

## Selecting the construction form

17 and 17 WB*

Dust load:

Unlimited

**) Wide-Body*

## Selecting the top cover for the clean-air chamber

4T-R

- *Pressure-shock resistant*
- *Side Removal*
- *Installation of bags through the mandoor*

4T1-R

- *Non-pressure shock resistant*
- *Top Removal*
- *Installation of bags from the clean-air side*

4T2-R

- *Pressure-shock resistant top with hinged cover*
- *Top Removal*
- *Installation of bags from the clean-air side*

4T3-R

- *Pressure-shock resistant "Walk in plenum" (Penthouse)*
- *Top Removal*
- *Installation of bags from the clean-air side*

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