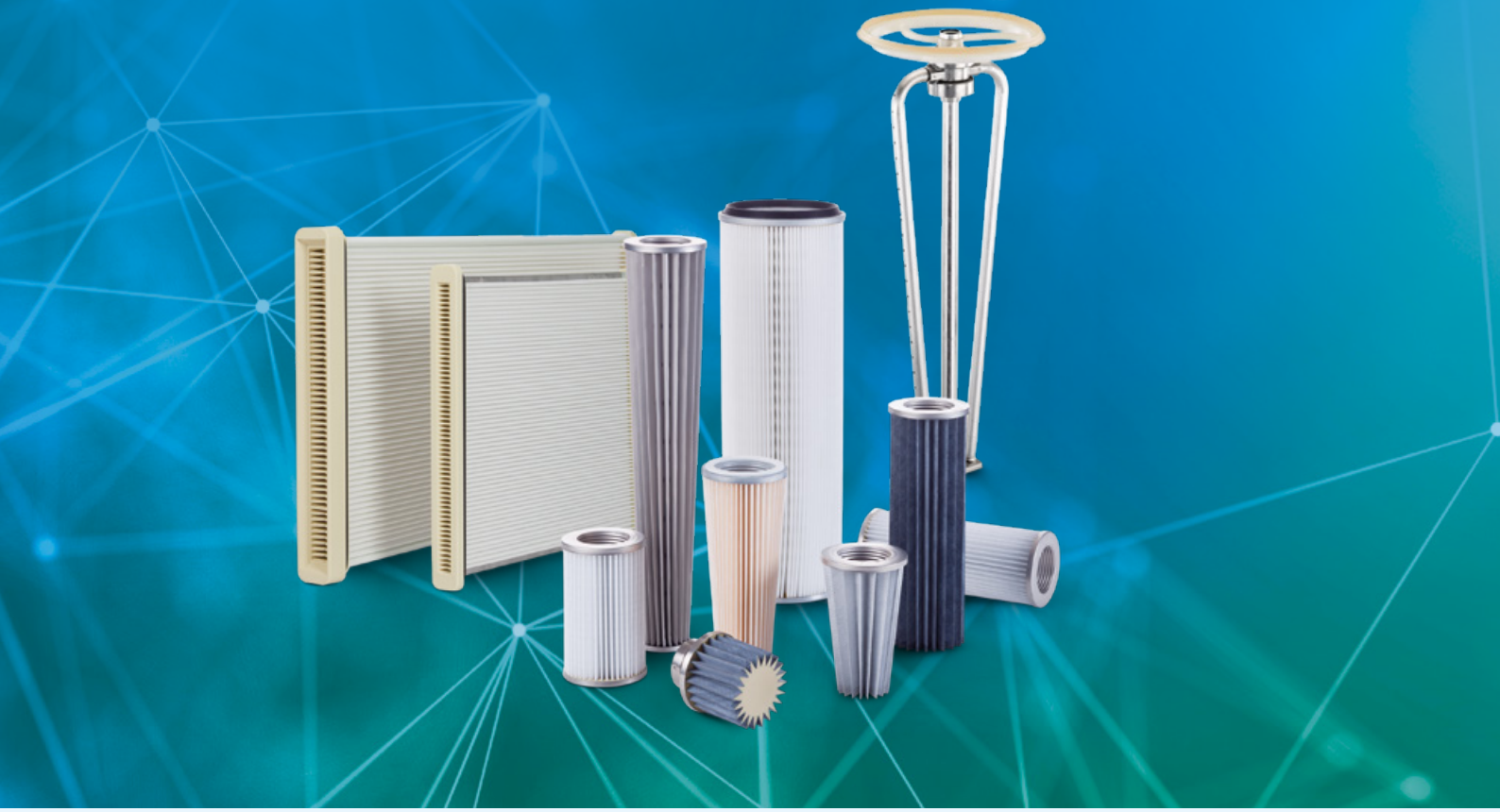
AIR FILTRATION

NOTHING BUT PURE AIR

Filter modules and elements that extract dust and dirt reliably and sustainably



Filtration Group®
Safer | Healthier | More Productive

FG Fluid Solutions
Filtration Group

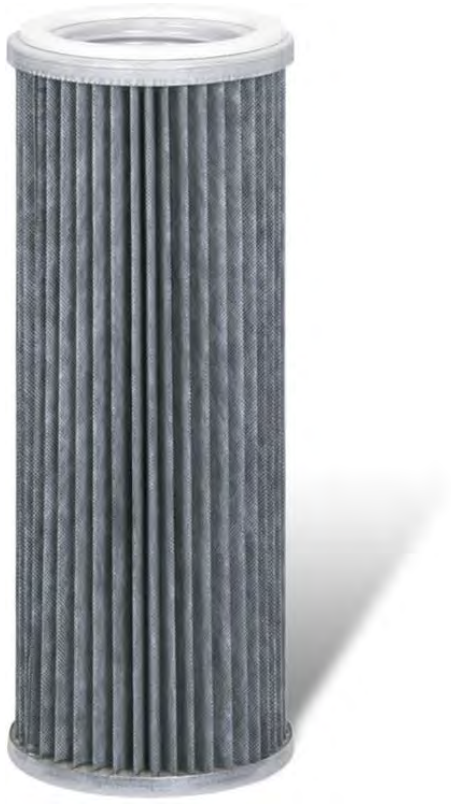
MAHLE Industrialfiltration is now Filtration Group. For more information, visit www.fluid.filtrationgroup.com

Dust filter cartridge
115 NZ/NZC

Ø 115 mm, Rd 60x4, clean or raw gas side installation

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top. In combination with the Filtration Group MJD cleaning unit (pressure cleaning with a multi-jet nozzle), this filter cartridge provides an efficient solution in exceptionally challenging environments. This is also supported by a special method of element pleat stabilisation. Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.



Characteristics

- High loading capacity
- Good cleaning properties
- High stability
- Installation on the clean or raw gas side
- Universally suitable
- Secured operation
- Large filter surface
- Optimized filter media
- Optimized energy efficency
- Worldwide distribution

2. Technical Data

Materials

Inner core:	Galvanized steel (standard) or stainless steel V4A (1.4571/AISI 316)
End caps:	Galvanized steel (standard) or stainless steel V4A (1.4571/AISI 316)
Seal:	self-adhesive needle felt
Filter media:	Ti 07/1 - Electrostatic conductive polyester fleece with PTFE membrane Ti 08 - Electrostatic conductive polyester fleece Ti 15 - Polyester fleece other media on request

Cleaning

Nozzle:	Multi jet nozzle G3/8
Cleaning pressure:	6 bar (max. 7 bar)
Differential pressure:	max. 18 mbar
Compressed air consumption per cleaning pulse:	9 l (fad)
Compressed air reservoir capacity:	max. 2 l per filter cartridge/cleaning pulse

Technical data is subject to change without notice!

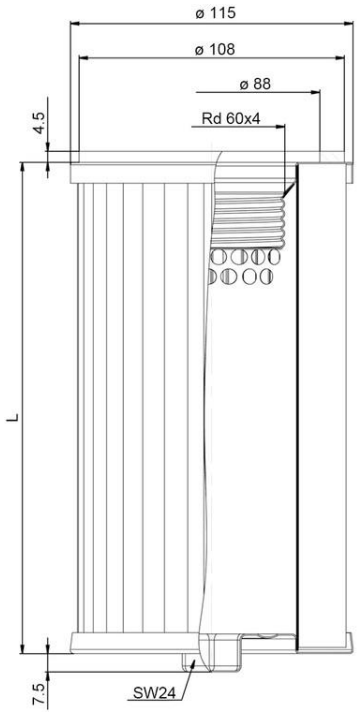
3. Type number key, description and dimensions

3.1 Type number key

Type	Series	Filter material	Filter surface	Material	Design	
852	625	Ti 07/1	-0.8	V4A	Band	Example

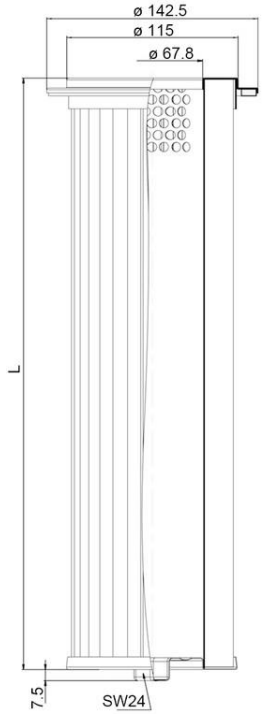
3.2 Description 115 NZ raw gas side

The dust filter cartridge has a closed bottom end cap with a hexagon bolt. It will be raw gas side mounted within a thread Rd 60x4. The dust filter cartridge will be pulled with a hexagon key with 15 Nm against the filter plate. During the mounting you have to take care, that the thread adapter will be mounted centrical on the filter plate, so that it fits perfect into the Rd 60x4 thread of the cartridge. We recommend cleaning the dust filter cartridge with the MAHLE multi-jet nozzle .



3.3 Descrption 115 NZC clean gas side

The dust filter cartridge has a closed bottom end cap. It will be clean gas side mounted and fixed with holding down clamps on top of the cartridge. During the mounting you have to take care, that the dust filter cartridge will be mounted centrical into the filter plate, so that the clamps can hold down the cartridge in a perfect way. We recommend cleaning the dust filter cartridge with the MAHLE multi-jet nozzle.



3.4 NZ Dimensions					
Type designation	**Length L [mm]**	**Filter surface [m³]**	**Max. vol. flow * [m³/h]**	**Start pressure loss** [Pa]**	**Max. operating temperature*** [°C]**
852 656 Ti ...	200	0.25	25.5	> 250	100 (standard)
852 623 Ti ...	300	0.40	41.0		
852 624 Ti ...	400	0.3/0.5	51.0		
852 625 Ti ...	600	0.8/1.0	81.0		
852 626 Ti ...	1000	1.3/1.65	130.0		

3.5 NZC Dimensions					
Type designation	**Length L [mm]**	**Filter surface [m³]**	**Max. vol. flow* [m³/h]**	**Start pressure loss** [Pa]**	**Max. operating temperature*** [°C]**
852 766 Ti ...	600	0.80	81.0	> 250	100 (Standard)
852 767 Ti ...	1000	1.3/1.65	130.0		
852 633 Ti ...	1200	1.5/2.1	215.0		

Several filter media are available for filter elements (see data sheet filter media).

* Depending on the air to media ratio of 1.7 m³/m² min

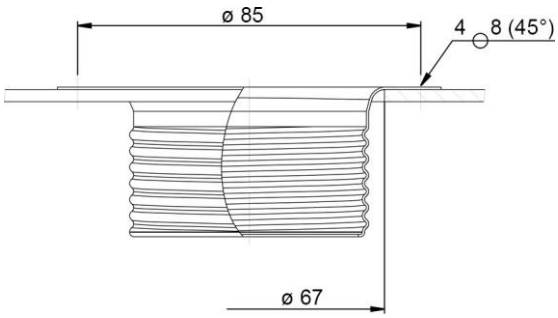
** Depending on volume flow and filter media

*** Depending on media/materials, higher temperature ranges on request

4. Installation

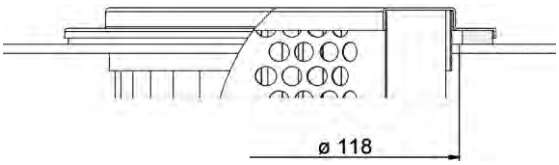
4.1 Raw gas side installation

The dust filter cartridge can be mounted on and dismantled from the filter plate using the Rd 60x4 thread adapter - no tools required (tightening torque max. 15 Nm). A hole with a diameter of 67 mm must be drilled in the filter plate in order to mount the thread adapter. The thread adapter should be spot-welded to the filter plate as shown in the drawing. Various adapters are available for installation on the cleaned side or for mating with Rd 72x5 or Rd 74x4 round threads.



4.2 Clean gas side installation

The dust filter cartridge is fastened to the filter plate on the cleaned side by use of holding down clamps. The cartridge will be put from the clean gas side through the hole in the filter plate into the raw gas side. To protect the pleats against the filter plate, there is a metal ring (approx. 16 mm high) glued into the end cap. We recommend cleaning the dust filter cartridge with the MAHLE multi-jet nozzle. Recommended diameter of the hole in the filter plate for clean gas side mounting is 118 mm.



5. Accessories

Order number	Designation
77834195	Thread adapter Rd 60x4 1.4571
77834187	Thread adapter Rd 60x4 evzk
79325234	Nozzle-M12 3/8 stainless steel
76360275	Nozzle-M12 3/8 Alu
79741232	MJD-12 00 ROH A1
76925655	MJD-12 00 REIN A1
70375835	MJD-12 00 ROH V2

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimized geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70562981.04/2019

Dust filter cartridge
120 NK

Ø 120 mm, Rd 72x5

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top.
The conical shape is the outcome of the cartridge´s superior flow behaviour and strength. Its performance has been significantly enhanced by the improved cleaning performance and the optimised flow conditions, especially in dust removal filters with jet pulse cleaning.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.

Characteristics

- Very high loading capacity
- Improved cleaning properties
- Optimised flow conditions
- High stability
- Installation on the raw gas side
- Universally suitable
- Worldwide distribution

2. Technical Data

Materials

Inner core: Galvanized steel (standard) or stainless steel V4A - AISI 316

End caps: Galvanized steel (standard) or stainless steel V4A - AISI 316

Seal: self-adhesive needle felt

Filter material: Ti 07 - Electrostatic conductive polyester fleece with PTFE membrane
Ti 08 - Electrostatic conductive polyester fleece
Ti 15 - Polyester fleece
Ti 19 - Cellulose/polyester carrier with PP meltblown
Other filter materials on request

Cleaning

Nozzle: Multi-jet nozzle G3/8

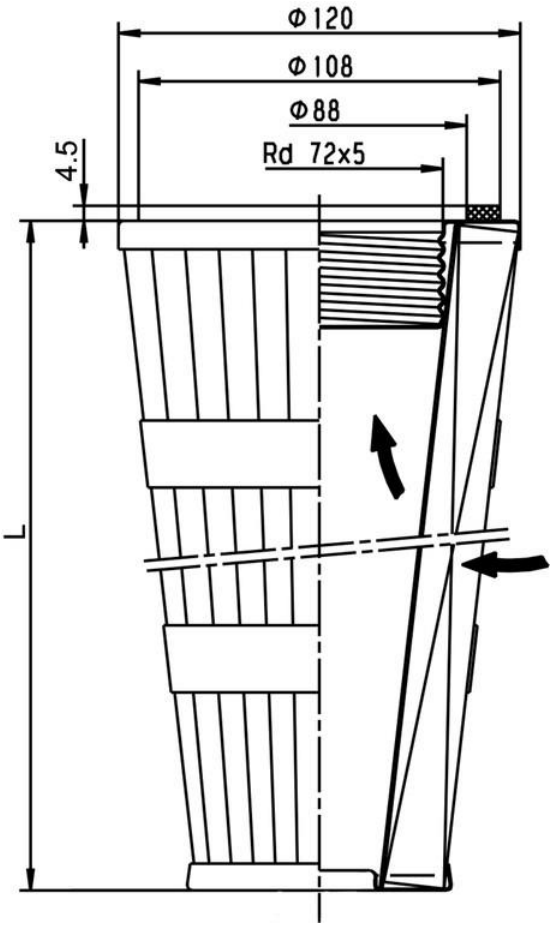
Cleaning pressure: 4 bar to 6 bar (max. 7 bar)

Differential pressure: max. 18 mbar

Compressed air consumption per cleaning pulse: 9 l (fad)

Compressed air reservoir capacity: approx. 2 l per filter cartridge

Technical data is subject to change without notice!



3. Order numbers

Order number	Type designation	Length L [mm]	Filter material	Filter surface [m²]	Max. vol. flow** [m³/h]	Max. operating temperature*** [°C]	Electro-static con-ductive
76353619	852 902 Ti 07-0.5 V4A*	300	Ti 07/1	0.5	70	100	yes
76353510	852 902 Ti 08-0.5		Ti 08			100	
76353528	852 902 Ti 15-0.5		Ti 15				no
76930879	852 902 Ti 19-0.5		Ti 19			90	
78345811	852 903 Ti 07-1 V4A*	600	Ti 07/1	1	120	100	yes
78311649	852 903 Ti 08-1		Ti 08			100	
78311821	852 903 Ti 15-1		Ti 15				no
78388001	852 903 Ti 19-1		Ti 19			90	
78333320	852 904 Ti 07-1.6 V4A*	982	Ti 07/1	1.6	170	100	yes
78311896	852 904 Ti 08-1.6		Ti 08			100	
78311912	852 904 Ti 15-1.6		Ti 15				no
78388019	852 904 Ti 19-1.6		Ti 19			90	

* Version made of stainless steel V4A - AISI 316 or equivalent

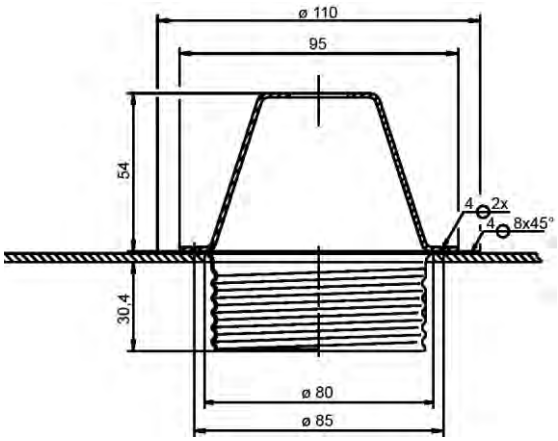
** These values may vary depending on the nature of the dust and the composition of the gas.

*** Depending on media/materials, higher temperature ranges on request

4. Installation

The dust filter cartridge can be mounted on and dismantled from the filter plate using the Rd 72x5 thread adapter - no tools required.
A hole with a diameter of 80 mm must be drilled in the filter plate in order to mount the thread adapter. The stirrup and the thread adapter should be spot-welded to the filter plate as shown in the drawing.
Various adapters are available for installation on the cleaned side or for mating with Rd 60x4 or Rd 74x4 round threads.

Tightening torque min. 6 Nm/max. 12 Nm



5. Accessories

Order number	Designation
77769201	Thread adapter Rd 72x5, galvanized steel
79382318	Thread adapter Rd 72x5, stainless steel V4A - AISI 316
79741232	MJD 12 raw gas 3/8
79325234	Nozzle-M12 3/8, stainless steel
76360275	Nozzle-M12 3/8; aluminium
78330508	Adapter Rd 60x4/Rd 72x5, galvanized steel
76315329	Adapter Rd 60x4/Rd 72x5, stainless steel V4A - AISI 316
79747148	Adapter Rd 73x4/Rd 72x5, stainless steel V4A - AISI 316
76139950	Adapter Rd 74x4/Rd 72x5, stainless steel V4A - AISI 316
78314445	Adapter cleaned gas Rd 72x5, galvanized steel
78314528	Adapter cleaned gas Rd 72x5, stainless steel V4A - AISI 316

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be puchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

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Filtration Group

MAHLE Industrialfiltration is now Filtration Group. For more information, visit www.fluid.filtrationgroup.com

Dust filter cartridge
120 NZ

Ø 120 mm, RD72x5

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top.
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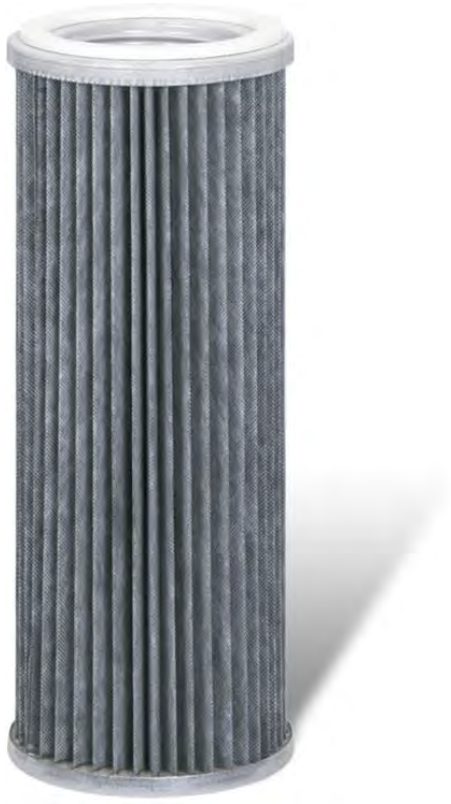


Characteristics

- Very high loading capacity
- Improved cleaning properties
- High stability
- Installation on the raw gas side
- Universally suitable
- Worldwide distribution

2. Technical Data

Materials

Inner core: Galvanized steel (standard) or stainless steel V4A - AISI 316

End caps: Galvanized steel (standard) or stainless steel V4A - AISI 316

Seal: self-adhesive needle felt

Filter material: Ti 07/1 - electrostatic conductive polyester fleece with PTFE membrane
Ti 08 - electrostatic conductive polyester fleece
Ti 15 - Polyester fleece
Ti 19 - Cellulose/polyester carrier with PP meltblown
Ti 26 - Glass fibre laminated

Cleaning

Nozzle: Multi-jet nozzle G3/8

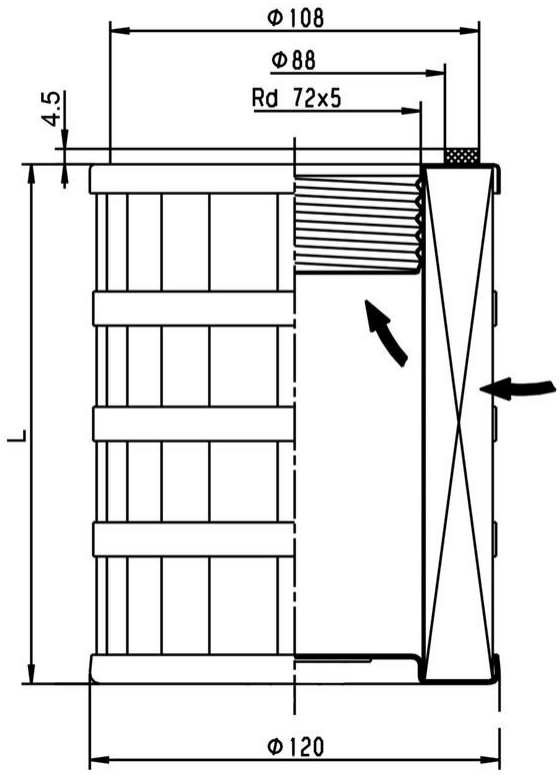
Cleaning pressure: 4 bar to 6 bar (max. 7 bar)

Differential pressure: max. 18 mbar

Compressed air consumption per cleaning pulse: 9 l (fad)

Compressed air reservoir capacity: approx. 2 l per filter cartridge

Technical data is subject to change without notice!



3. Order numbers

Order number	Type designation	Length L [mm]	Filter material	Filter surface [m²]	Max. vol. flow*** [m³/h]	Max. operating temperature [°C]	Electr. con-ductive
78334856*	852 926 Ti 07-0.3 V4A**	200	Ti 07/1	0.3	40	100	yes
78334864*	852 926 Ti 08-0.3		Ti 08				
78334872*	852 926 Ti 15-0.3		Ti 15				no
76362289*	852 926 Ti 19-0.3		Ti 19			90	
79356049	852 838 Ti 07-0.5 V4A**	300	Ti 07/1	0.5	70	100	yes
78218562	852 838 Ti 08-0.5		Ti 08				
78218547	852 838 Ti 15-0.5		Ti 15				no
78388043	852 838 Ti 19-0.5		Ti 19			90	
76305130	852 838 Ti 26-0.5		Ti 26		80		
76307136	852 838 Ti 26-0.5 V4A**		Ti 26				
78216293	852 838 Ti 19-0.8		Ti 19	0.8			

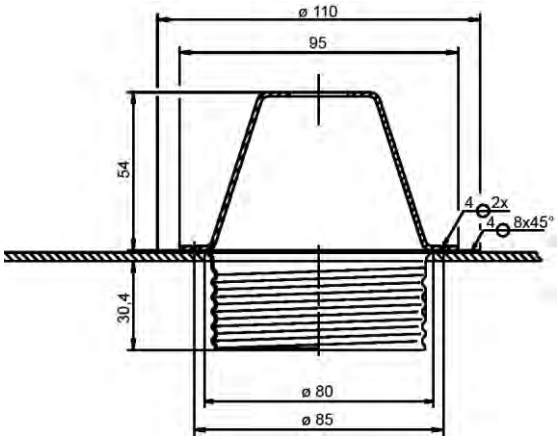
* Pack of 2

** Version made of stainless steel V4A - AISI 316 or equivalent

*** These values may vary depending on the nature of the dust and the composition of the gas.

4. Installation

The dust filter cartridge can be mounted on and dismantled from the filter plate using the RD72x5 thread adapter - no tools required.
A hole with a diameter of 80 mm must be drilled in the filter plate in order to mount the thread adapter. The stirrup and the thread adapter should be spot-welded to the filter plate as shown in the drawing.
Various adapters are available for installation on the cleaned side or for mating with RD60x4 or RD74x4 round threads.



5. Accessories

Order number	Designation
77769201	Thread adapter RD72x5, galvanized steel
79382318	Thread adapter RD72x5, stainless steel V4A - AISI 316
79741232	MJD 12 raw gas 3/8
79325234	Nozzle-M12 3/8, stainless steel
76360275	Nozzle-M12 3/8; aluminium
78330508	Adapter RD60x4/RD72x5, galvanized steel
76315329	Adapter RD60x4/RD72x5, stainless steel V4A - AISI 316
79747148	Adapter RD73x4/RD72x5, stainless steel V4A - AISI 316
76139950	Adapter RD74x4/RD72x5, stainless steel V4A - AISI 316
78314445	Adapter cleaned gas RD72x5, galvanized steel
78314528	Adapter cleaned gas RD72x5, stainless steel V4A - AISI 316

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be puchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70342657.04/2019

Dust filter cartridge
120 OK/OZ

Ø 120 mm, open pleat at bottom

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top.
According to the special design and the FDA release, this type of filter is especially suitable for applications in the food and pharma industry. By the use of a special sealing concept (silicone form sealing) and our "Open Pleat" technology, product accumulations will be avoid in process. Therefor an optimised cleaning effect of the cartridges will be secured.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.

Characteristics

- High loading capacity
- Very good cleaning properties
- Defined pleat allocation for best performance
- High stability
- Installation on the raw gas side
- Universally suitable
- Application in pharmaceuticals and food industry thanks FDA approval acc. to 21 CFR Ch. I § 177.1550)
- Avoid of product accumulation in process
- Secured operation
- Optimised filter media
- Optimised energy efficiency
- Worldwide distribution

2. Technical Data

Materials

Inner core:	Stainless steel V4A (1.4571/AISI 316)
End caps:	at top Stainless steel V4A (1.4571/AISI 316) below open pleat, PU (polyurethane)
Seal:	self-adhesive needle felt alternative: NBR form seal, black (FDA, electrically conductive) Silicone form seal, transparent (FDA)
Filter material:	Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane Ti 08 - Electrostatical conductive polyester fleece, aluminium coated Ti 15 - Polyester fleece Other filter materials on request

Cleaning

Nozzle:	Multi-jet nozzle G3/8
Cleaning pressure:	6 bar (max. 7 bar)
Differential pressure:	max. 18 mbar
Compressed air consumption per cleaning pulse:	9 l (fad)
Compressed air reservoir capacity:	approx. 2 l per filter cartridge

Technical data is subject to change without notice!

3. Type number key, Description and Dimensions

3.1 Type number key

Type	Design	Filter media	Filter surface	Material	Version	Ordering example
852	065	Ti 07/1	-0.2	V4A	FDA	

3.2 Description

These dust filter cartridges were developed by Filtration Group for particularly challenging filtration tasks in the food and pharmaceuticals. The cartridge design facilitates optimum cleaning of the filter cake in conjunction with the Filtration Group multi-jet nozzle. The optimum cleaning effect will be especially enhanced by our special "Open Pleat" technology. The dust filter cartridge has a closed bottom end cap.

3.3 Dimensions

Type designation	Version	Fig.	Length L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Starting pressure loss** [Pa]	Max. operating temperature [°C]
852 067 Ti ...	cyl.	1	80	0.06	6	< 250	80 (standard) depending on gas/material
852 923 Ti ...	cyl.	1	200	0.15	15		
852 065 Ti ...	cyl.	1	300	0.25	25		
852 935 Ti ...	con.	2	300	0.19	20		
852 924 Ti ...	cyl.	1	600	0.5	50		

* Depending on the air to media ratio of 1.7 m³/m² min

** Depending on volume flow and filter media

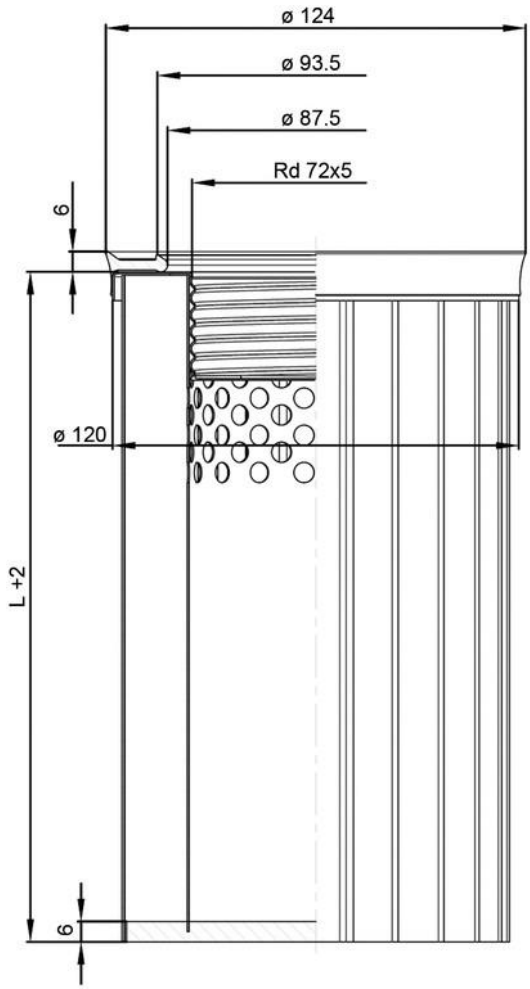


Fig. 1 852 067, 852 923, 852 065

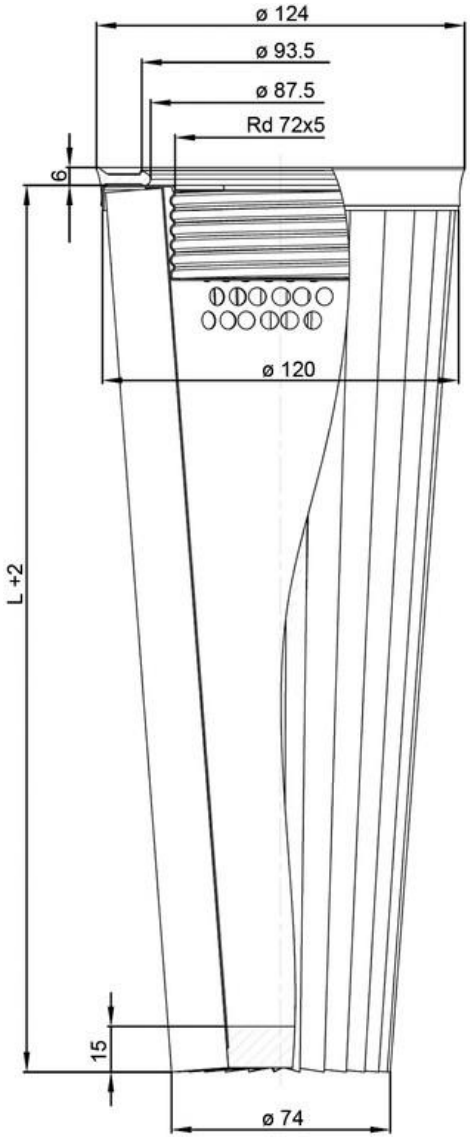
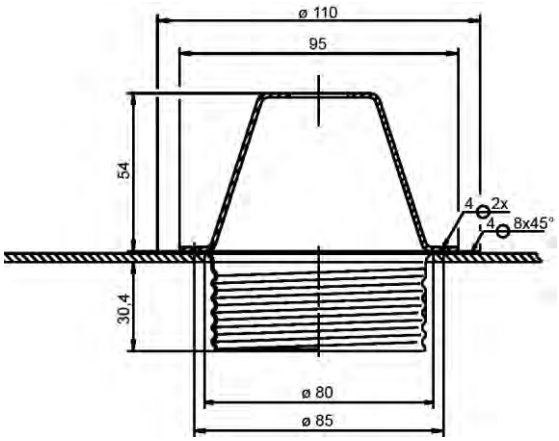


Fig. 2 852 935

4. Installation

The dust filter cartridge can be mounted on and dismantled from the filter plate using the Rd72x5 thread adapter - no tools required (max. torque 15 Nm).
A hole with a diameter of 80 mm must be drilled in the filter plate in order to mount the thread adapter. The stirrup and the thread adapter should be spot-welded to the filter plate as shown in the drawing.



5. Accessories

Order number	Designation
79382318	Thread adapter Rd72x5 stainless steel V4A - AISI 316
79741232	MJD 12 raw gas 3/8
76103105	Nozzle-M12 3/8 stainless steel 1.4301 with snap ring (Z)
79733882	Nozzle-M12 3/8 Alu with snap ring (Z)
70375129	Form seal 120/089.0/13.0 SI FDA
70512635	Form seal 120/089.0/13.0 NBR FDA electrically conductive
76315329	Adapter Rd60x4/Rd72x5 stainless steel V4A - AISI 316
79747148	Adapter Rd73x4/Rd72x5 stainless steel V4A - AISI 316
76139950	Adapter Rd74x4/Rd72x5 stainless steel V4A - AISI 316
78314528	Adapter cleaned gas Rd72x5, stainless steel V4A - AISI 316

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be puchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.
The special design of the cartridges enable to clean them wet in installed or non-installed condition. Pleas attend to the cleaning procedure of the filter media.

6. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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Dust filter cartridge
120 XK

Ø 120 mm, Rd 72x5, temperature-resistant

1. Features

This high-performance dust filter cartridge was developed by Filtration Group for particularly challenging filtration tasks in the chemical and food industries. The conical shape is the outcome of the cartridge´s superior flow behaviour and strength. This cartridge design facilitates optimum cleaning in continuous operation in conjunction with a Filtration Group cleaning unit. Typical dust deposits are virtually eliminated by completely filling the end cap on the bottom, because almost all deposits on the cartridge are drained off during cleaning. The key features here are the Filtration Group MJD multi-jet nozzle and pleats supported by wire mesh.
All filter materials used have undergone extensive testing. Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests on the customer´s site and in our own facilities form the backbone of affortable and reliable products.

Characteristics

- Improved cleaning properties
- Optimised flow conditions
- High stability
- Installation on the raw gas side
- Worldwide distribution

2. Technical Data

Materials

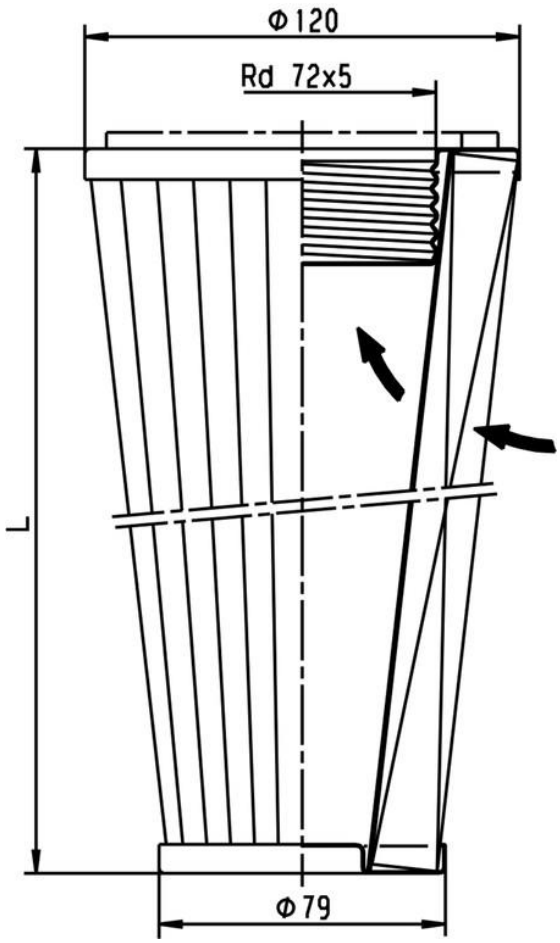
Inner core:	Stainless steel V4A - 1.4571
End caps:	Stainless steel V4A - 1.4571
Seal:	self-adhesive needle felt* (supplied loose)
Filter material:	DRG 5N - Stainless steel wire mesh 1.4404 Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane Ti 18/1 - Polyphenyl sulphide with PTFE Membrane 1100 µm

Cleaning

Nozzle:	Multi-jet nozzle G3/8
Cleaning pressure:	3 bar to 6 bar
Differential pressure:	max. 25 mbar
Compressed air consumption per cleaning pulse:	9 l (fad)
Compressed air reservoir capacity:	approx. 2 l per filter cartridge

* Other sealing systems can be supplied

Technical data is subject to change without notice!



3. Order numbers

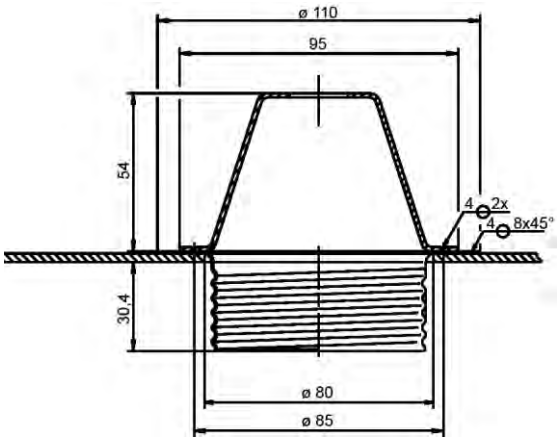
Order number	Type designation	Length L [mm]	Filter material	Filter surface [m²]	Max. vol. flow** [m³/h]	Max. operating temperature [°C]	Electr. con-ductive
76354922	852 902 DRG 5N-0.25 V4A FRV*	300	DRG 5N	0.25	65	130	yes
70324025	852 902 Ti 07-0.25 V4A FRV*		Ti 07/1				
76354633	852 902 Ti 18-0.25 V4A FRV*		Ti 18/1				no
79394081	852 903 DRG 5N-0.5 V4A FRV*	600	DRG 5N	0.5	100	240	yes
79748666	852 903 Ti 07-0.5 V4A FRV*		Ti 07/1			130	
76361984	852 903 Ti 18-0.5 V4A FRV*		Ti 18/1			160	no
76160311	852 904 Ti 07-0.8 V4A FRV*	982	Ti 07/1	0.8	150	130	yes

* Version made of stainless steel V4A - 1.4571 or equivalent with glued pleat backs

** These values may vary depending on the nature of the dust and the composition of the gas.

4. Installation

The dust filter cartridge can be mounted on and dismantled from the the filter plate using the Rd 72x5 thread adapter - no tools required. A hole with a diameter of 80 mm must be drilled in the filter plate in order to mount the thread adapter. The thread adapter should be spot-welded to the filter plate as shown in the drawing.
Various adapters are available for installation on the cleaned side or for mating with Rd 60x4 or Rd 74x4 round threads.



5. Accessories

Order number	Designation
79382318	Thread adapter Rd 72x5, stainless steel V4A - 1.4571
79325234	Nozzle-M12 3/8, stainless steel
76315329	Adapter Rd 60x4/Rd 72x5, stainless steel V4A - 1.4571
79747148	Adapter Rd 73x4/Rd 72x5, stainless steel V4A - 1.4571
76139950	Adapter Rd 74x4/Rd 72x5, stainless steel V4A - 1.4571
78314528	Adapter cleaned gas Rd 72x5, stainless steel V4A - 1.4571

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be puchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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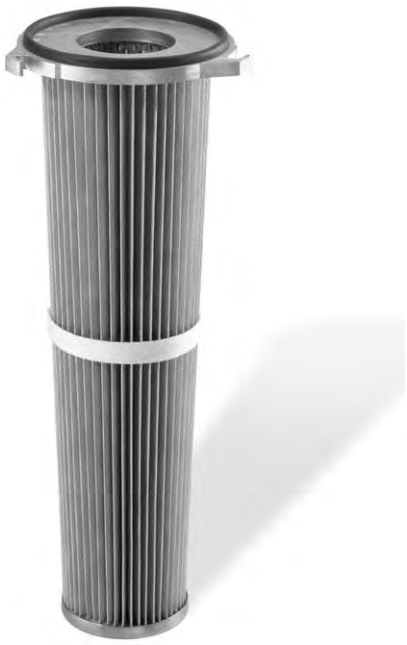
Dust filter cartridge
145/156/220/328 NKH

Ø 145/156/220/328 mm, conical with hook-shaped flange

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top.
The conical shape is the outcome of the cartridge´s superior flow behaviour and strength. Its performance has been significantly enhanced by the improved cleaning performance and the optimised flow conditions, especially in dust removal filters with jet pulse cleaning. This is also supported by a special method of element pleat stabilisation.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.



Characteristics

- Very high loading capacity
- Improved cleaning properties
- Optimised flow conditions
- High stability
- Installation on the raw or clean gas side
- Universally suitable
- For high volumen flow
- Optimised filter media
- Worldwide distribution

2. Technical Data

Materials

Inner core:	Galvanized steel (standard)
End caps:	Galvanized steel/aluminium (standard)
Seal:	NBR-seal fitted into notch (ø 328 NKH version glued in)
Filter material:	Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane Ti 08 - Electrostatical conductive polyester fleece, aluminium coated Ti 15 - Polyester fleece Ti 19 - Cellulose/polyester carrier with PP meltblown Other filter materials on request

Cleaning

Nozzle:	ø 145/156 mm - Multi jet nozzle G3/8 ø 220 mm - Multi jet nozzle G3/4 ø 328 mm - Multi jet nozzle G1
Cleaning pressure:	4 to 6 bar (max. 7 bar)
Differential pressure:	max. 18 mbar
Compressed air consumption per cleaning pulse:	6 to 90 l (fad)
Compressed air reservoir capacity:	approx. 2 - 32 l per filter cartridge/cleaning pulse

Technical data is subject to change without notice!

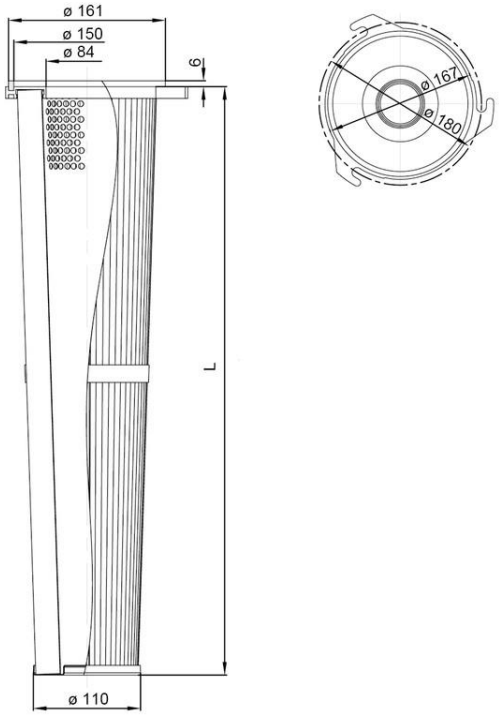
3. Type number key, description and dimensions

3.1 Type number key

Type	Series	Filter material	Filter surface	Material	Design	
852	039	Ti 07/1	-2.7		BAND	Example

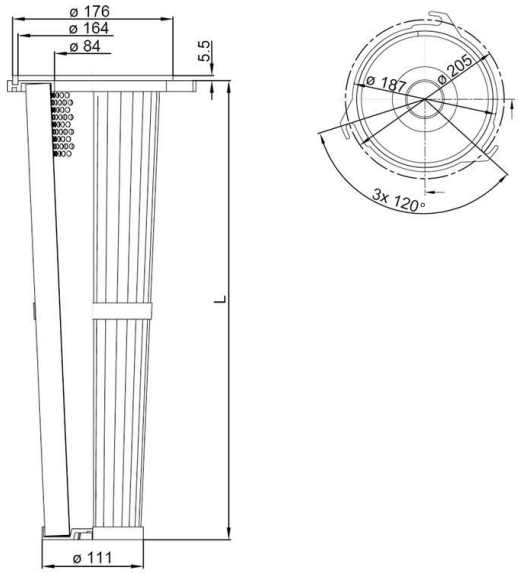
3.2 Description 145 NKH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The filter cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. Recommended hole in the filter plate for clean gas side installation 149 mm.



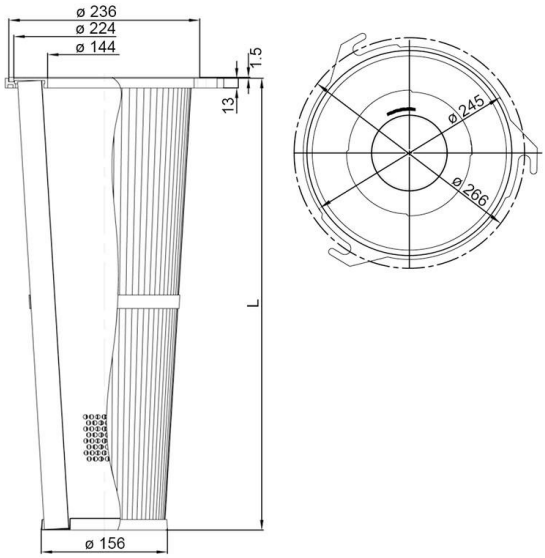
3.3 Description 156 NKH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The filter cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. Recommended hole in the filter plate for clean gas side installation 160 mm.



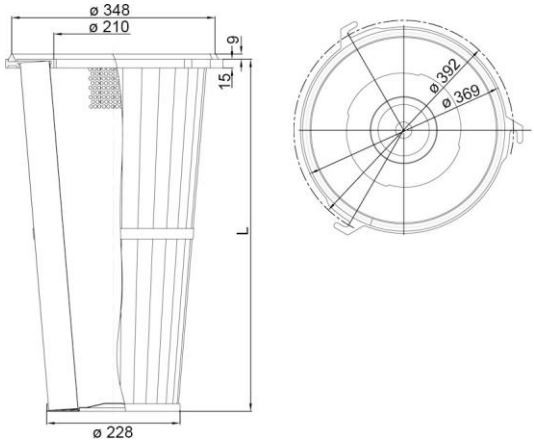
3.4 Description 220 NKH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle.
Hole in the filter plate for clean gas side installation 225 mm.



3.5 Description 328 NKH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle.
Hole in the filter plate for clean gas side installation 333 mm.



Several filter media are available for filter elements (see data sheet filter media).

3.6 Dimensions 145 NKH

Type designation	Length L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 082 Ti ...	600	1.6	165	> 250	80 (standard)
852 039 Ti ...	1000	2.7	275		

3.7 Dimensions 156 NKH

Type designation	Lenght L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 097 Ti ...	500	1.8	185	> 250	80 (standard)

3.8 Dimensions 220 NKH

Type designation	Length L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 018 Ti ...	600	4	380	> 250	80 (standard)
852 056 Ti ...	1000	5.0/6.0	620		

3.9 Dimensions 328 NKH

Type designation	Lenght L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 061 Ti ...	600	7.5	765	> 250	80 (standard)
852 041 Ti ...	1000	12.5	1275		
852 051 Ti ...	1200	12/15	1530		

* Depending on the air to media ratio of 1.7 m³/m² min

** Depending on volume flow and filter media

*** Depending on media/materials, higher temperature ranges on request

4. Installation

4. 1 Raw gas side installation
Three studs with loosened nuts are welded on the filter plate. The cartridge have to be hooked onto the nuts on the raw gas side. The cartridge will be fixed to the filter plate by fastening the nuts. For deinstalling the nuts have to be loosened and the cartridge can be removed downward from the unit easily.

4. 1 Clean gas side installation
Three studs with loosened nuts are welded on the filter plate. The cartridge have to be pushed through the hole in the filter plate from the clean gas side. The cartridge will be fixed to the filter plate by fastening the nuts. For deinstalling the nuts have to be loosened and the cartridge can be removed upward from the unit easily.

5. Accessories

Order number	Designation	Cartridge ø [mm]
76360275	Nozzle-M12 3/8 Alu	145/156
70343824	Nozzle-M16 3/4 Alu Multijet	220
76381198	Nozzle-M32 1 Alu SE Multijet	328

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimized geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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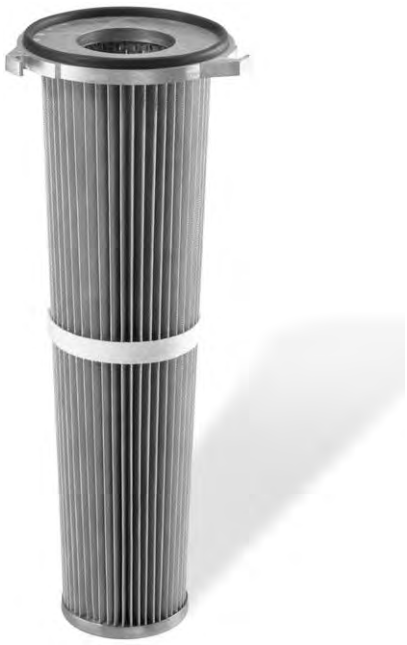
Dust filter cartridge
145/156/220/328 NZH

Ø 145/156/220/328 mm, cylindrical with hook-shaped flange

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top.
The conical shape is the outcome of the cartridge´s superior flow behaviour and strength. Its performance has been significantly enhanced by the improved cleaning performance and the optimised flow conditions, especially in dust removal filters with jet pulse cleaning. This is also supported by a special method of element pleat stabilisation.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.



Characteristics

- Very high loading capacity
- Improved cleaning properties
- Optimised flow conditions
- High stability
- Installation on the raw or clean gas side
- Universally suitable
- For high volumen flow
- Optimised filter media
- Worldwide distribution

2. Technical Data

Materials

Inner core:	Galvanized steel (standard)
End caps:	Galvanized steel/aluminium (standard)
Seal:	NBR-seal fitted into notch (ø 328 NKH version glued in)
Filter material:	Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane Ti 08 - Electrostatical conductive polyester fleece, aluminium coated Ti 15 - Polyester fleece Ti 19 - Cellulose/polyester carrier with PP meltblown Other filter materials on request

Cleaning

Nozzle:	ø 145/156 mm - Multi jet nozzle G3/8 ø 220 mm - Multi jet nozzle G3/4 ø 328 mm - Multi jet nozzle G1
Cleaning pressure:	4 to 6 bar (max. 7 bar)
Differential pressure:	max. 18 mbar
Compressed air consumption per cleaning pulse:	6 - 90 l (i.N.)
Compressed air reservoir capacity:	approx. 2 to 32 l per filter cartridge/cleaning pulse

Technical data is subject to change without notice!

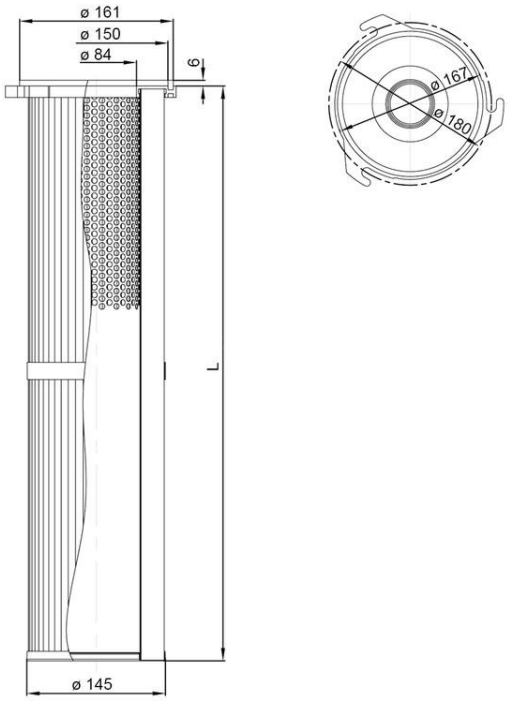
3. Type number key, description and dimensions

3.1 Type number key

Type	Series	Filter material	Filter surface	Material	Design	
852	628	Ti 07/1	-3.5		BAND	Example

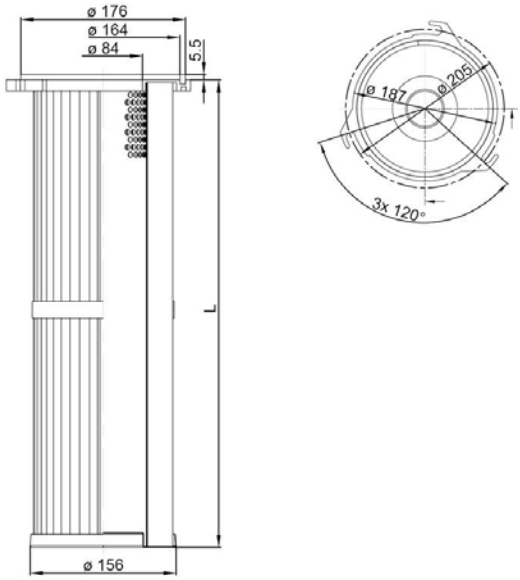
3.2 Description 145 NZH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The filter cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. Recommended hole in the filter plate for clean gas side installation 149 mm.



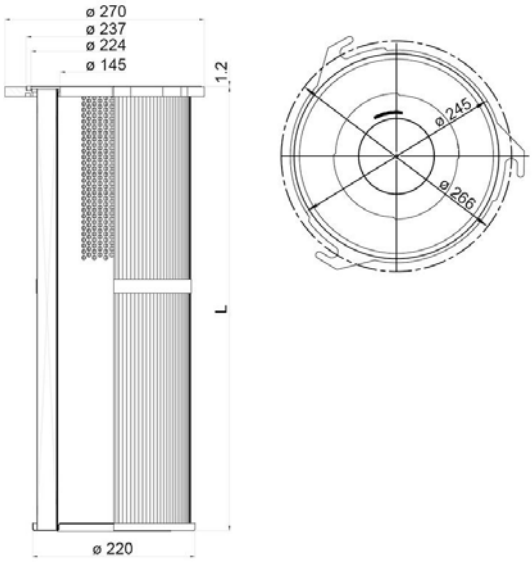
3.3 Description 156 NZH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The filter cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. Recommended hole in the filter plate for clean gas side installation 149 mm.



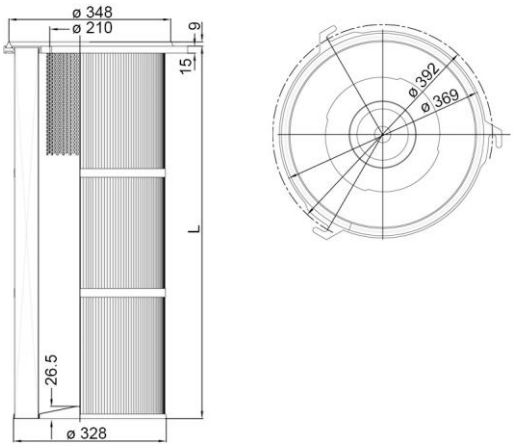
3.4 Description 220 NZH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. Recommended hole in the filter plate for clean gas side installation 225 mm.



3.5 Description 328 NZH

The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted with a hook-shaped flange. The cartridge is fixed to the filter plate via three studs. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. Recommended hole in the filter plate for clean gas side installation 333 mm.



Several filter media are available for filter elements (see data sheet filter media).

3.6 Dimensions 145 NZH

Type designation	Length L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 627 Ti ...	600	1.7/2.1	215	> 250	80 (standard)
852 628 Ti ...	1000	2.7/3.5	355		
852 629 Ti ...	1200	3.3/4.3	430		

3.7 Dimensions 156 NZH

Type designation	Lenght L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 791 Ti ...	500	1.8	185	> 250	80 (standard)

3.8 Dimensions 220 NZH

Type designation	Length L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 792 Ti ...	600	3.0/3.7	380	> 250	80 (standard)
852 963 Ti ...	1000	5.0/6.1	620		
852 798 Ti ...	1200	6.1/7.3	745		

3.9 Dimensions 328 NZH

Type designation	Lenght L [mm]	Filter surface [m²]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 987 Ti ...	600	7.5/10	1020	> 250	80 (Standard)
852 843 Ti ...	800	13	1326		
852 976 Ti ...	1000	12.5/16	1630		
852 630 Ti ...	1200	15/20	2040		

* Depending on the air to media ratio of 1.7 m³/m² min

** Depending on volume flow and filter media

*** Depending on media/materials, higher temperature ranges on request

4. Installation

4. 1 Raw gas side installation
Three studs with loosened nuts are welded on the filter plate. The cartridge have to be hooked onto the nuts on the raw gas side. The cartridge will be fixed to the filter plate by fastening the nuts. For deinstalling the nuts have to be loosened and the cartridge can be removed downward from the unit easily.

4. 1 Clean gas side installation
Three studs with loosened nuts are welded on the filter plate. The cartridge have to be pushed through the hole in the filter plate from the clean gas side. The cartridge will be fixed to the filter plate by fastening the nuts. For deinstalling the nuts have to be loosened and the cartridge can be removed upward from the unit easily.

5. Accessories

Order number	Designation	Cartridge ø [mm]
76360275	Nozzle-M12 3/8 Alu	145/156
70343824	Nozzle-M16 3/4 Alu Multijet	220
76381198	Nozzle-M32 1 Alu SE Multijet	328

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimized geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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Dust filter cartridge
160 NZS/NKS

∅ 160 mm, conical or cylindrical

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate the finest particles from gases. The element is supplied with dust-laden gas from the outside. The cleaned air flow exits through the upper, open end plate to the clean gas side.
In combination with the Filtration Group Multijet nozzle (MJD), the conical filter elements enable optimum filter cake cleaning. This is particularly supported by the pleats, which have been stabilized according to a special process. The conical Filtration Group dust filter element is characterised by optimum flow behaviour and excellent cleaning properties, even with difficult dusts.
The pure and raw gas-side mounting options offer a great advantage and flexibility in the installation variations of this filter element.
A consistently high quality of the Filtration Group dust filter elements is ensured by regular, comprehensive material and performance checks. Our application technology department and our modern development laboratories are constantly working on the further development and optimisation of our products. Application tests at the customer's and in our test facilities are reflected in cost-effective and reliable products.

Characteristics

- Very high loading capacity
- Improved cleaning properties
- Optimised flow conditions
- High stability
- Installation on the raw or clean gas side
- Universally suitable
- Worldwide distribution

2. Technical Data

Materals

Inner core:	Galvanized steel (standard) or stainless steel V4A
End caps:	Kunststoff PA 66 GF 30
Seal:	V form seal NBR
Filter material:	Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane Ti 08 - Electrostatical conductive polyester fleece, aluminium coated Ti 15 – Polyester fleece Ti 19 - Cellulose/polyester carrier with PP meltblown Ti 26 – Glass fibre, laminated on both sides with PET Other filter materials on request

Cleaning

Nozzle:	Multi jet nozzle G 3/4
Cleaning pressure:	4 bar to 6 bar (max. 7 bar)
Differential pressure:	max.15 mbar
Compressed air consumption per cleaning pulse:	4,5 l to 9 l je Element und je nach Elementlänge
Compressed air reservoir capacity:	ca. 1 l bis 2 l per filter cartridge/cleaning and depending on cartridge length

Technical data is subject to change without notice!

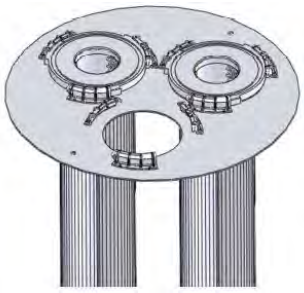
3. Type number key and description

3.1 Type number key					
852 054	Cartridge type				
	Ti 07/1	Filter material			
		– 3.5	Filter surface in m²		
			V4A	Material variation	
				FDA	Cartridge design
852 054	**Ti 07/1**	**– 3.5**	**V4A**	**FDA**	

Please note that the lists shown here are not complete. Therefore we ask you to contact us before placing your order.

3.2 160 NZS

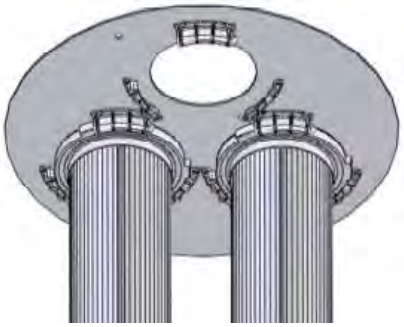
Filtration Group GmbH has developed these filter elements for a variety of filtration tasks in air filtration. These elements, in combination with the Filtration Group Multijet nozzle, enable optimum filter cake cleaning. This is particularly supported by the pleats, which are stabilized according to a special process.
The filter element has a closed end plate at the bottom. The filter element is mounted on the raw or clean gas side by means of a bayonet system. During installation, it must be ensured that the filter element is tightened to a maximum torque of 15 Nm.
The filter element is cleaned via a multijet nozzle.



Type	Legth "L" [mm]	Filter surface [m²]	Max. vol. flow * [m³/h]	Start pressure loss [Pa]**	Max operating temperature [°C]
852 XXX Ti …	300	0.75/1.10	115	> 250	Depending on media/materials
852 XXX Ti …	600	1.50/2.20	225		
852 XXX Ti …	1000	2.50/3.50	350		
852 XXX Ti …	1200	3.00/4.20	430		

3.3 160 NKS

Filtration Group GmbH has developed conical high-performance filter elements for a variety of filtration tasks in air filtration. In combination with the Filtration Group Multijet nozzle, these elements enable optimum cleaning of the filter cake. This is particularly supported by the conical design and folds stabilized by a special process.
The filter element has a closed end plate at the bottom. The filter element is mounted on the raw or clean gas side using a bayonet system. During installation, care must be taken to ensure that the filter element is tightened to a maximum torque of 15 Nm.
The filter element is cleaned via a multijet nozzle.

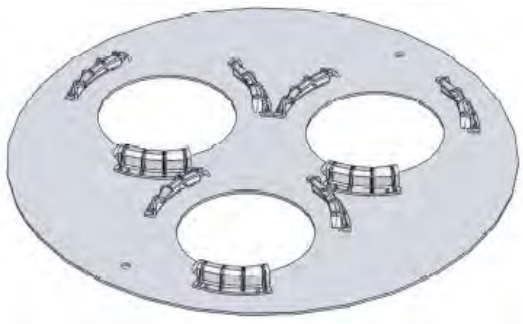


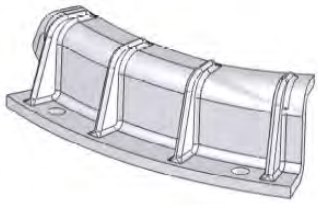
Type	Legth "L" [mm]	Filter surface [m²]	Max. vol. flow * [m³/h]	Start pressure loss [Pa]**	Max operating temperature [°C]
852 XXX Ti …	300	0.75/1.10	115	> 250	Depending on media/materials
852 XXX Ti …	600	1.50/2.20	225		
852 XXX Ti …	1000	2.50/3.50	350		
852 XXX Ti …	1200	3.00/4.20	430		

Explanation of the tables
Different filter materials are available for the filter elements see data sheet Filter material.
* Depending on the air to media ratio of 1,7 m³/m² min
Deviations from these values are possible due to dust type and gas composition.
** Depending on volume flow and filter media

4. Installation

The dust filter element can be mounted and dismounted on the filter plate on the raw or clean gas side using the bayonet system without tools. A tool can be supplied for fixing the filter plate on the clean gas side. An exact hole pattern for mounting the bayonet brackets is available on request.
The brackets are each fixed to the filter plate with 2 screws. Depending on whether the filter elements are mounted on the raw or clean gas side, the brackets are attached to the top or bottom of the filter plate.





5. Accessories

Order number	Designation
n.n.	Mounting Speed Star (3er Pack)
70366440	Nozzle-M16 3/4 1.4301 MULTIJET OZB A4
70343824	Nozzle-M16 3/4 ALU MULTIJET OZB
n.n.	Tool clean gas side assembly

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimized geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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04/2019

Dust filter cartridge
160 NK

Ø 160 mm, Type 852 054, 984 mm long

1. Features

The conical Filtration Group 852 054 dust filter cartridge unites optimum flow behaviour with excellent cleaning properties for even the most problematic dusts.
The wide range of high-quality media together with our long history of experience in air cleaning technology make Filtration Group a trustworthy partner for a multitude of applications.
In combination with the Filtration Group MJD cleaning unit (pressure cleaning with a multi-jet nozzle), this filter cartridge provides an efficient solution in exceptionally challenging environments.

Characteristics

- High volume flows
- Optimised flow conditions
- Excellent cleaning properties
- Worldwide distribution

2. Technical data

Materials

Inner core: Galvanized steel (standard) or stainless steel V4A - 1.4571

End caps: Galvanized steel (standard) or stainless steel V4A - 1.4571

Seal: self-adhesive needle felt

Filter material: Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane
Ti 08 - Electrostatical conductive polyester fleece, aluminium coated
Ti 15 - Polyester fleece
Ti 19 - Cellulose/polyester carrier with PP meltblown
Ti 56/2 - Polyester fleece with PTFE-membrane

Cleaning

Nozzle: Multi-jet nozzle G ¾

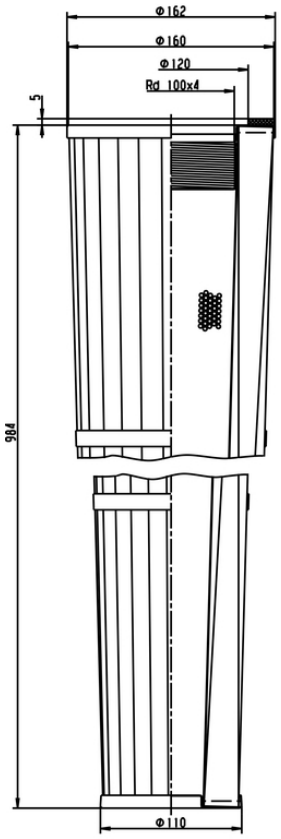
Cleaning pressure: 4 -6 bar (max. 7 bar)

Differential pressure: max. 18 mbar

Compressed air consumption per cleaning pulse: 23 l (fad)

Compressed air reservoir capacity: approx. 5 l per filter cartridge

Technical data is subject to change without notice!



3. Order numbers

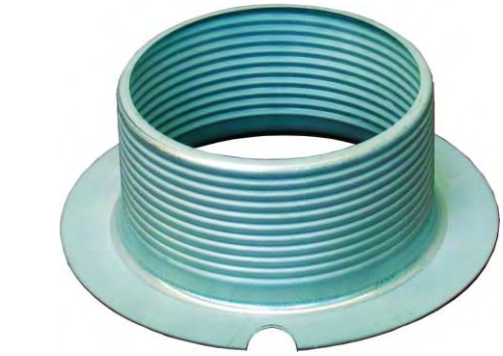
Order number	Type designation	Filter material	Filter surface [m²]	Max. vol. flow** [m³/h]	Max. operating temperature. [°C]	Electro-statical conductive	Comments
70328072	852 054 Ti 07-2.5	Ti 07/1	2.5	350	120	yes	for explosive dusts, very high separation efficieny
70328077	852 054 Ti 07-2.5 V4A*				130		for explosive dusts, very high separation efficieny, approved for FDA-applications
70328083	852 054 Ti 08-3.5	Ti 08	3.5		120		for explosive dusts
70328088	852 054 Ti 08-3.5 V4A*				130		for explosive dusts, approved for FDA-applications
70317049	852 054 Ti 15-3.5	Ti 15			120	no	Good chemical resistance, high stability
70317050	852 054 Ti 15-3.5 V4A*				130		Good chemical resistance, high stability
70328092	852 054 Ti 19-2.5	Ti 19	2.5		90		High separation efficieny, especially for fine dusts
70328094	852 054 Ti 56-2.5	Ti 56/2			120		High separation efficieny, suitable for fine dusts
70328096	852 054 Ti 56-2.5 V4A*				130		

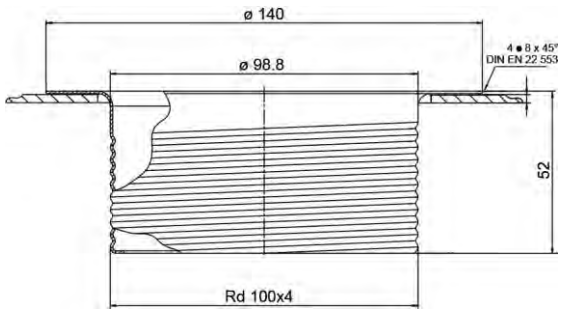
* Version made of stainless steel V4A - 1.4571 or equivalent

** These values may vary depending on the nature of the dust and the composition of the gas.

4. Installation

The 852 054 dust filter cartridge can be mounted on and dismantled from the the filter plate using the Rd 100x4 mounting thread adapter - no tools required.
A hole with a diameter 108 mm must be drilled in the filter plate in order to mount the thread adapter. The mounting thread adapter should be spot-welded to the filter plate as shown in the drawing.
The Rd 100x4 mounting thread adapter is available from Filtration Group in galvanized steel or stainless steel V4A - 1.4571.





5. Accessories

Order number	Designation
70316990	Mounting thread adapter Rd 100x4, galvanized steel
70316991	Mounting thread adapter Rd 100x4, stainless steel V4A - 1.4571
70343901	MJD 16 raw gas ¾
70343906	MJD 16 raw gas ¾ V2A - 1.4301
76360283	Nozzle ¾ aluminium
79341447	Nozzle ¾ V4A - 1.4571

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be puchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a tripod and various small assembly components. The tripod maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

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Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70342665.04/2019

FG Fluid Solutions
Filtration Group

MAHLE Industrialfiltration is now Filtration Group. For more information, visit www.fluid.filtrationgroup.com

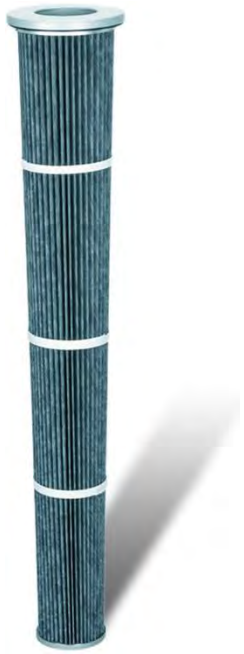
Dust filter cartridge
160 NKC

Ø 160 mm, installation on cleaned side

1. Features

This Filtration Group cartridge meets modern demands for waste reduction and sustainability. Thanks to the reusable iner frame, only plastics parts that are suitable for incineration need to be exchanged if the cartridge is replaced. All metal parts can be reused again. The cartridge can optionally also be supplied with a fixed (non-re-usable) inner frame. Star-pleated Filtration Group dust filter cart-ridges are used to separate dust from gases. The conical cartridge is perfused from outside to inside. The retained dust is cleaned by a air jet pulse. The cartridge performance has been enhanced by the improved cleaning properties and the optimized flow conditions resulting from its conical design.

Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. Ap-plications tests both on the customer´s site and in our own facilities form the backbone of affortable and reliable products. The results of these tests form the backbone of innvative products, mature pro-duction methods and unmatched operational reliability.



Characteristics

- Very high loading capacity
- High stability
- Excellent cleaning properties
- Optimized flow conditions
- Universally suitable
- Large filter surface
- Wide range of optimized filter media
- Optimized energy efficency
- Worldwide distribution

2. Technical Data

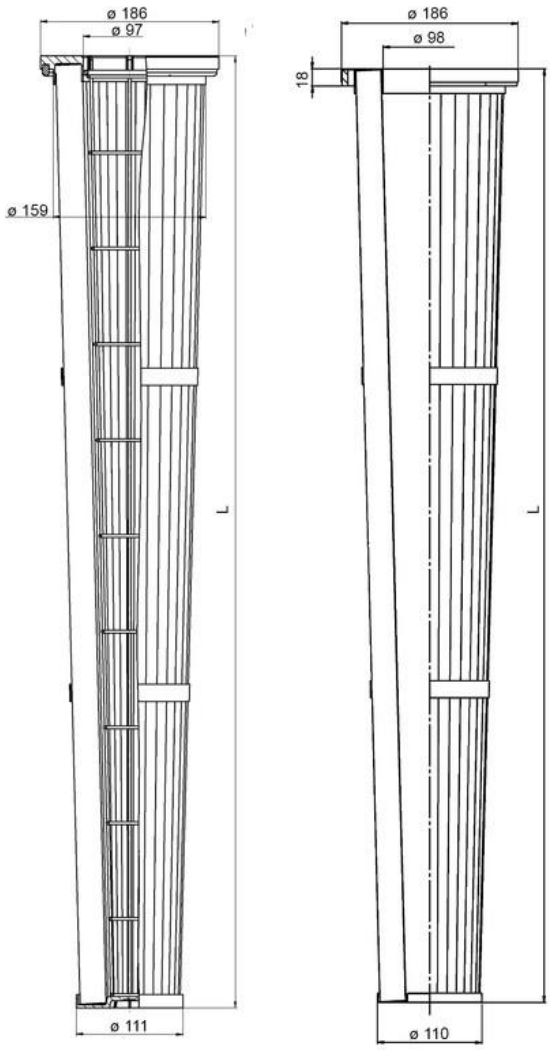
Materials

Inner core:	Galvanized steel (standard) or stainless steel V4A - AISI 316
End caps:	PA66 GF25 (Standard) or stainless steel V4A - AISI 316
Seal:	EPDM or silicone foam
Filter media	Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane Ti 08 - Electrostatical conductive polyester fleece, aluminium coated Ti 15 - Polyester fleece Ti 19 - Cellulose/polyester carrier with PP meltblown Other filter materials on request

Cleaning

Nozzle:	Multi-jet nozzle G ¾
Cleaning pressure:	4 bar to 6 bar (max. 7 bar)
Differential pressure:	max. 18 mbar
Compressed air consumption per cleaning pulse:	23 l (fad)
Compressed air reservoir capacity:	approx. 5 l per cartridge

Technical data is subject to change without notice!



3. Type number key and dimensions

3.1 Type number key

Type	Series	Filter media	Filter surface	Material	Design	
852	953	Ti 07/1	-2.5	V4A	-	Example

3.2 Dimensions

Type designation	Length L [mm]	Filter surface [m²]	max. vol. flow* [m³/h]	Start pressure loss** [pa]	max. operating temp.*** [°C]	Remark
852 029	600	1.5/2.2	225	> 250	100	Encapsulated inner frame
852 953	1000	2.5/3.5	360			
852 828	1200	3.0/4.2	430			
852 653	1000	2.5/3.5	360			Reusable inner frame

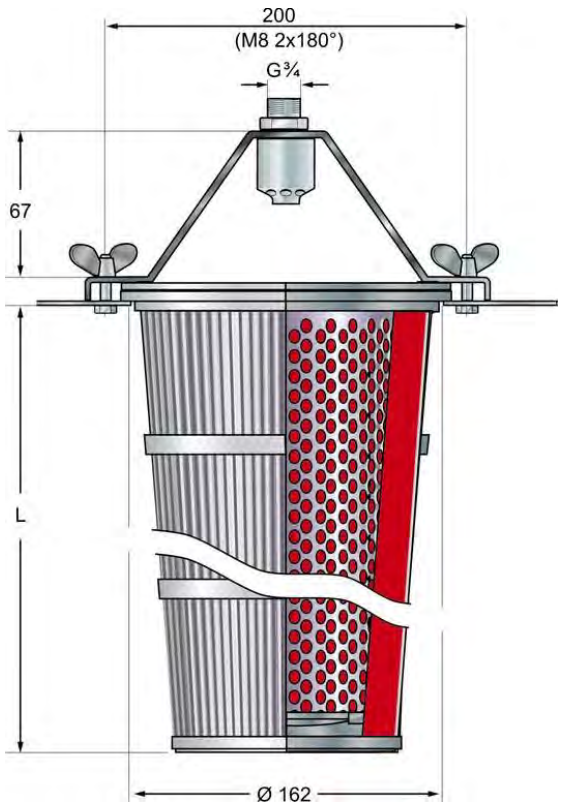
* Depending on the air to media ratio of 1.7 m³/m² min

** Depending on volume flow and filter

*** Depending on media/materials, higher temperature ranges on request

4. Installation

The dust filter cartridge is fastened to the filter plate on the cleaned side by means of retainers.
A hole with a diameter of 162 mm must be drilled in the filter plate.



5. Accessories

Order number	Designation
79741240	MJD 16 00 clean gas A1 VP
70390250	MJD 16 00 clean gas V2 VP
70343824	Nozzle M 16 ¾, aluminium OZB
70366440	Nozzle M 16 ¾, 1.4301 OZB

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimized geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be puchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a stirrup and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

7. Design

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70342669.04/2019

Dust filter cartridge
200 NZ

Ø 200 mm

1. Features

Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The cartridge will be inflowed from the outside with dust loaded air or gas. The cleaned air flows inward through the open end cap to the clean side.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.

Characteristics

- High loading capacity
- Improved cleaning properties
- High stability
- Installation on dirt side
- Universally suitable
- Optimised filter materials
- Worldwide distribution

2. Technical Data

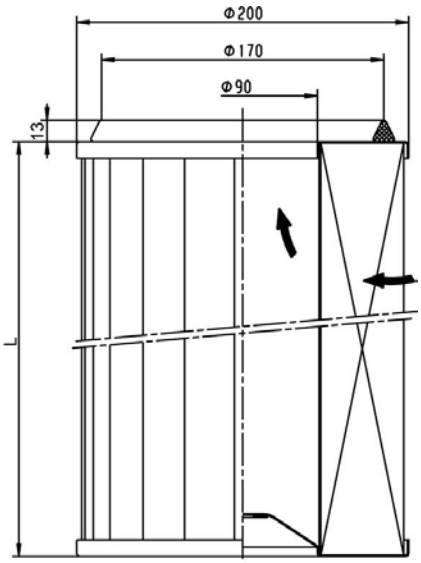
Materials

Inner core: Galvanized steel
End caps: Galvanized steel
Seal: PUR soft material
Filter material: Ti 08 - Electrostatical conductive polyester fleece, aluminium coated
Ti 15 - Polyester fleece
Ti 26 - Glass fibre, laminated
Other filter materials on request

Cleaning

Nozzle: Multi-jet nozzle G1
Cleaning pressure: 3 bar to 4 bar (max. 5 bar)
Differential pressure: max. 18 mbar
Compressed air consumption: 23 l (fad) per cleaning pulse
Pressure vessel capacity: approx. 5 l per filter cartridge

Technical data is subject to change without notice!



3. Order numbers

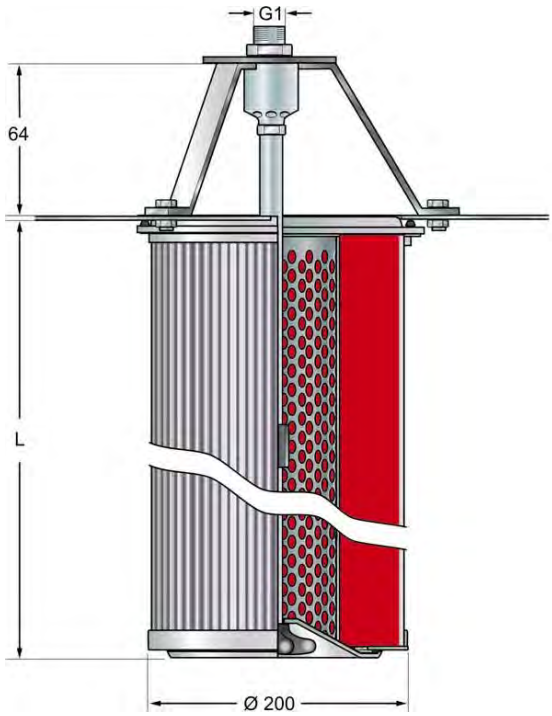
Order number	Type designation	Length L [mm]	Filter material	Filter surface [m²]	Max. volume flow* [m³/h]	Max. operating temperature [°C]	Electro-statical con-ductive
78330904	852 847 Ti 08-2.5	400	Ti 08	2.5	230	80	yes
78310559	852 847 Ti 15-2.5		Ti 15				no
77951262	852 847 Ti 15-5		Ti 15	5	400		
79395492	852 847 Ti 26-2.5 silicone**		Ti 26	2.5	300		

* These values may vary depending on the nature of the dust and the composition of the gas.

** Depth filter

4. Installation

The 852 847 dust filter cartridge is fastenend to the filter plate from the dirt side by means of a tie rod (tightening torque approx. 15 N m). A hole with a diameter of 88 mm must be drilled in the filter plate.



5. Accessories

Order number	Designation
76335046	Nozzle-M32 1; aluminium Multijet M 12

6. Cleaning

We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle. The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.

7. Design

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Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70342672.04/2019

Dust filter cartridge
328 NK Quick-Lock

Ø 328 mm, fastened with spring clips

1. Features

The Filtration Group Quick-Lock dust filter cartridge is designed for quick and easy mounting, with only a minimal clearance required for installation and dismantling. The conical shape is the outcome of the cartridge´s superior strength and flow behaviour. Its performance has been significantly enhanced by the improved cleaning power

Characteristics

- High volume flows
- Optimized flow conditions
- Improved cleaning properties
- Easy mounting
- Minimal clearance required
- Worldwide distribution

2. Technical data

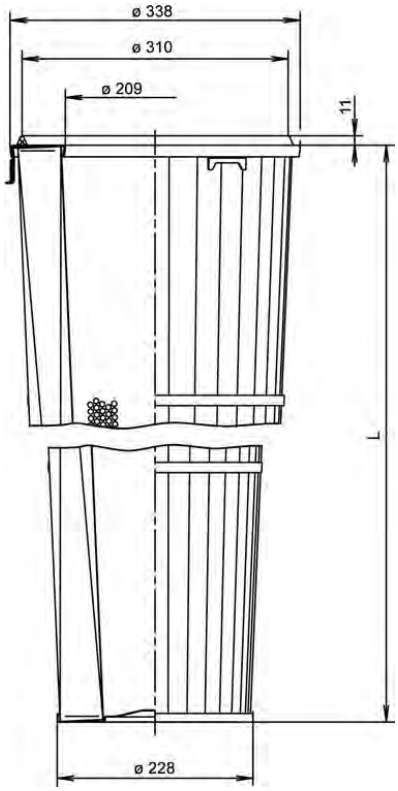
Materials

Inner core: Galvanized steel
End caps: Galvanized steel
Seal: Soft PUR material
Filter material: Ti 07/1 - Electrostatic conductive polyester fleece with PTFE membrane
Ti 08 - Electrostatic conductive polyester fleece
Ti 15 - Polyester fleece
Ti 19/2 - Cellulose/polyester carrier with Polypropylen meltblown
Ti 56/2 - Polyester fleece with PTFE membrane
other filter media on request

Cleaning

Nozzle: Multi-jet nozzle G1
Cleaning pressure: 4 bar - 6 bar (max. 7 bar)
Differential pressure: max. 15 mbar

Technical data is subject to change without notice!



Compressed air consumption		
Type designation	**Pressure vessel capacity [l]**	**Compressed air consumption per cleaning pulse [l] (i.N.)**
852 052 Ti ...	16	approx. 50
852 062 Ti ...	32	approx. 80
852 032 Ti ...	32	approx. 90

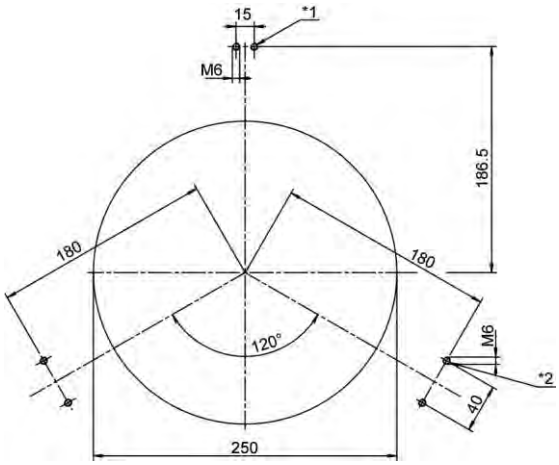
3. Order numbers

Order number	Type designation	Length L [mm]	Filter material	Filter surface [m²]	Max. vol. flow* [m³/h]	Max. operating temperature [°C]	Electro-static con-ductive
70308668	852 052 Ti 07-7.5	600	Ti 07/1	7.5	900	50	yes
70308670	852 052 Ti 08-7.5		Ti 08		700		
70308673	852 052 Ti 15-7.5		Ti 15				no
70308678	852 052 Ti 19-7.5		Ti 19/2				
70308675	852 052 Ti 56-7.5		Ti 56/2		900		
70308725	852 062 Ti 07-12.5	985	Ti 07/1	12.5	1200		yes
70302873	852 062 Ti 08-12.5		Ti 08		1100		
70308734	852 062 Ti 15-12.5		Ti 15				no
70308739	852 062 Ti 19-10		Ti 19/2	10			
70308736	852 062 Ti 56-12.5		Ti 56/2	12.5	1200		
70302463	852 032 Ti 07-15	1166	Ti 07/1	15	1600		yes
76360564	852 032 Ti 08-15		Ti 08		1400		
70302466	852 032 Ti 15-15		Ti 15				no
70302470	852 032 Ti 19-12		Ti 19/2	12			
70302467	852 032 Ti 56-15		Ti 56/2	15	1600		

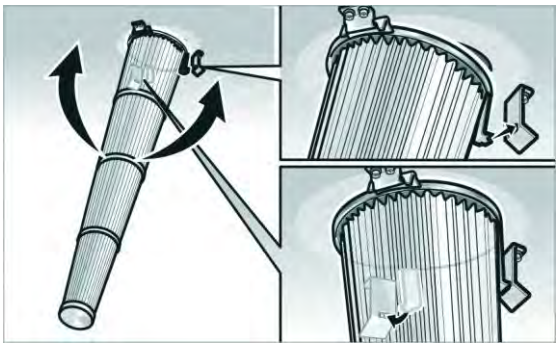
* These values may vary depending on the nature of the dust and the composition of the gas.

4. Installation

The dust filter cartridge can be installed and removed on the dirty side with spring clips (Quick-Lock system - no tools required).
The spring clips should be fastened to the filter plate as shown in the drawing.



*1 = Filter element holder
*2 = Fixing clip



5. Accessories

Order number	Designation
76956668	Quick-Lock fastening set - 1x (1 filter element holder, 2 fixing clips, screws)
76956676	Quick-Lock fastening set - 10x
70304809	MJD-32 00 ROH A1 Quick-Lock cleaning unit (Multi-jet nozzle G1, double nipple 1", tripod, screws)

6. Cleaning

Two cleaning systems are available for conical dust filter cartridges with a diameter of 328 mm.

Filtration Group multi-jet nozzle
The optimized geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level. The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a tripod and various small assembly components. The tripod maintains an optimum distance from the cartridge to ensure maximum cleaning
efficiency.

Filtration Group conical rotating wing
The baffle plate closes during cleaning and the rotating wing begins to turn. The large number of pulsed air jets that are discharged from the wing elements guarantee gentle, uniform cleaning over the complete cartridge length. The simultaneous vibratory movement in the pleats generates a significant improvement in cleaning efficiency, particularly with critical dusts. Each pleat is cleaned several times. The filter life is optimized as a result of the rotating wing.

7. Design

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70342683.07/2019

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Dust filter cartridge
Quick-Lock cartridge with RLK

Quick-Lock cartridge with conical rotating wing

1. Features

The combination of the conical cartridge without bands, the conical rotating wing and the Quick look fixing allows smallest possible mounting height in the dirt side room. The rotating wing ensures quiet, careful and energy efficient cleaning. The conical design benefits a low upstream velocity, increases the performance ratio and improves the cleaning behaviour by effective dust sedimentation.

Characteristics

- Careful cleaning at max 4 bar pressure for a longer cartridge life time at low operating costs
- Conical cartridge without bands
- Compact design allows smallest mounting height in the dirt side room
- Effective cleaning via decreased upstream velocity and improved dust sedimentation
- Worldwide distribution

Applications

- Especially at a high dust load
- Powder coating
- Food industry
- Metalworking

2. Installation





3. Product range dust filtration





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04/2019

Dust filter cartridge
328 NZ

Ø 328 mm

1. Features

Star-pleated Filtration Group dust cartridges are used to separate dust from gases. Dusty air or gas is applied to the outside of the cartridges under pressure and the cleaned airflow exits at the top. The retained dust can be cleaned off with a rotating wing by means of a cleaning pulse or compressed air.
Regular and extensive performance testing of all materials used in production is the key to the consistently high quality of Filtration Group dust cartridges. Additional applications tests are carried out both on the test stands in our own development laboratory and on the customer's site. The results of these tests form the backbone of innovative products, mature production methods and unmatched operational reliability.

Characteristics

- High separation efficiency
- Uniform pleat distribution
- Reliable operation
- Large filter surface in a very small space
- Optimised filter materials
- Installation on the dirt side
- Worldwide sales

2. Technical Data

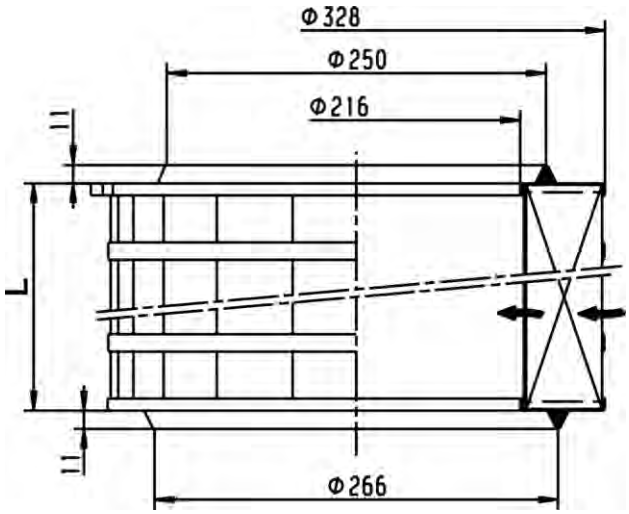
Material

Inner core: Galvanized steel (standard) or stainless steel V4A

End caps: Galvanized steel (standard) or stainless steel V4A

Seal: Soft material PUR

Filter media: Ti 07/1 - Electrostatic conductive polyester fleece with PTFE membrane
Ti 08 - Electrostatic conductive polyester fleece, aluminium coated
Ti 15 - Polyester fleece
Ti 19/2 - Cellulose/polyester carrier with Polypropylen meltblown
Ti 56/2 - Polyester fleece with PTFE membrane
Ti 70 - Cellulose with 30 % polyester fibres
Other filter materials on request



Cleaning

Nozzle: RLD or MJD Rohgass

Cleaning pressure: -3 bar to 4 bar, max. 4.5 bar (for RLD)
-5 bar to 6 bar (for MJD)

Differential pressure: max. 15 mbar

Technical data is subject to change without notice!

3. Order numbers

Order number	Type designation**	Length L [mm]	Filter media	Filter surface [m²]	max. volume flow*** [m³/h]	max. operating temperature [°C]	Electro-static con-ductive
78388274	852 907 Ti 07-5	300	Ti 07/1	5	400	80	yes
78313124	852 907 Ti 15-5		Ti 15				no
78313249	852 907 Ti 70-6.3		Ti 70	6.3			
79354770	852 908 Ti 07-7.5	600	Ti 07/1	7.5	750	80	yes
79354788	852 908 Ti 07-7.5 V4A*						
79355447	852 908 Ti 08-10	600	Ti 08	10	750	80	yes
79354697	852 908 Ti 15-10		Ti 15				no
79354200	852 908 Ti 19-7.5	600	Ti 19/2	7.5	750	80	no
79354895	852 908 Ti 70-13		Ti 70	13			
78361479	852 908 Ti 07-7.5 V4A Band*		Ti 07/1	7.5			yes
79355454	852 908 Ti 08-10 Band	600	Ti 08	10	750	80	yes
78312985	852 908 Ti 15-10 Band		Ti 15				no
78387979	852 908 Ti 19-7.5 Band		Ti 19/2	7.5			
79355140	852 909 Ti 07-12.5	1000	Ti 07/1	12.5	1200	80	yes
79355181	852 909 Ti 19-12.5		Ti 19/2				no

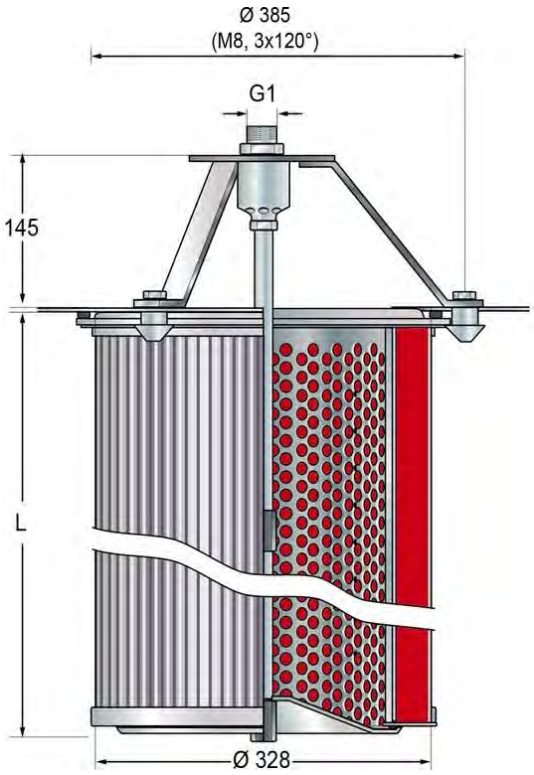
* Version made of stainless steel V4A

** Further cartridge types available on request

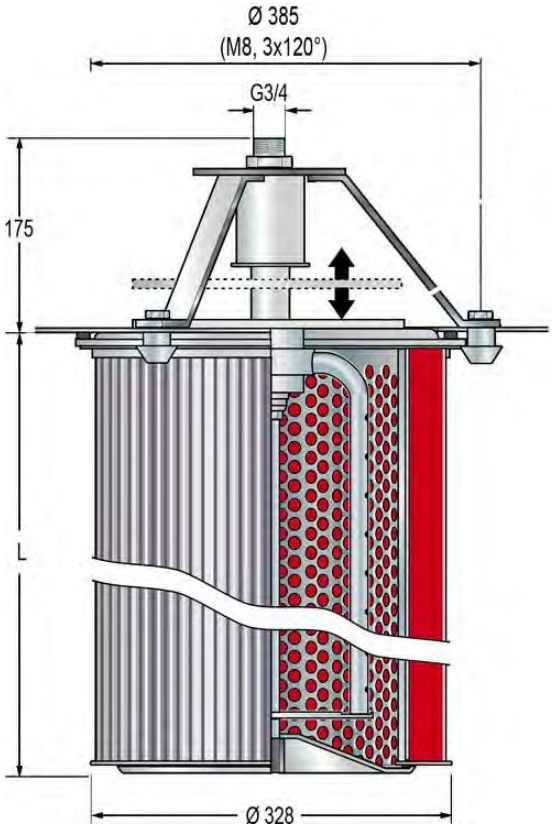
*** These values may vary depending on the nature of the dust and the composition of the gas.

4. Installation

The dust filter cartridges (diameter: 328 mm) are fastened to the filter plate on the dirt side by means of a tie rod (tightening torque approx. 15 Nm).
A hole with a diameter of 214 mm must be drilled in the filter plate. Mounting is facilitated by a centre ring.



Multi-jet nozzle (MJD)



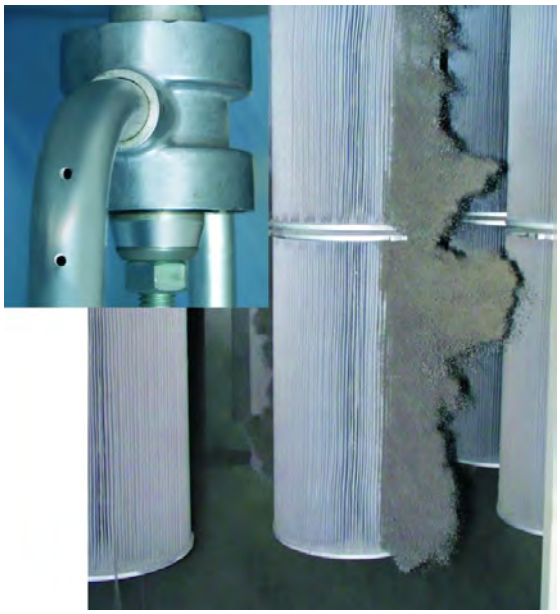
Rotating wing (RLD)

5. Accessories

Order number	Designation
76161913	Reusable end cap, galvanized steel
76161921	Reusable end cap, stainless steel V4A - AISI 316
77838568	Centre ring-EL 033, galvanized steel
77934326	Centre ring-EL 033, stainless steel V2A - AISI 304
77885031	Centre ring-2E 033, galvanized steel
78215220	Centre ring-2E 033, stainless steel V2A - AISI 304
79791104	Holding bolts PA6, pack of 3
79356387	Cleaning unit MJD-32 06 ROH A1
78331852	Cleaning unit RLD-32 06 ROH A1
79339219	Cleaning unit RLD-32 06 ROH V2
78296840	Cleaning unit RLD-32 06 ROH V1

6. Cleaning

Two cleaning systems are available for dust filter cartridges with a diameter of 328 mm



Filtration Group multi-jet nozzle (MJD)
The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level. The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a tripod and various small assembly components. The tripod maintains an optimum distance from the cartridge to ensure maximum cleaning
efficiency.

Filtration Group rotating wing (RLD)
The baffle plate closes during cleaning and the rotating wing begins to turn. The large number of pulsed air jets that are discharged from the wing elements guarantee gentle, uniform cleaning over the complete cartridge length. The simultaneous vibratory movement in the pleats generates a significant improvement in cleaning efficiency, particularly with critical dusts. Each pleat is cleaned several times. The filter life is optimised as a result of the rotating wing.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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Dust filter cartridge
328 NZ/NZC/UZ/XZ

Ø 328 mm, cylindrical

1. Features

Star-pleated Filtration Group dust cartridges are used to separate dust from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top. The retained dust can be cleaned off with a cleaning pulse or compressed air. Two systems multi-jet nozzle (pressure cleaning) or rotating wing (cleaning pulse) are available.
This is also supported by a special technology of element pleat stabilisation/pleat distance control (see data sheet Pleat Distance Control).
Regular and extensive performance testing of all materials used in production is the key to the consistently high quality of Filtration Group dust cartridges. Additional applications tests are carried out both on the test stands in our own development laboratory and on the customer's site. The results of these tests form the backbone of innovative products, mature production methods and unmatched operational reliability.

Characteristics

- High loading capacity
- Improved cleaning properties
- Optimised flow conditions
- Defined pleat allocation for best performance
- High stability
- Installation on the raw or clean gas side
- Universally suitable
- Reliable operation
- Large filter surface
- Optimised filter materials
- High energy efficiency
- Worldwide sales

2. Technical Data

Materials

Inner core:	Galvanized steel (standard) or stainless steel V4A
End caps:	Galvanized steel (standard) or stainless steel V4A
Seal:	self adhesive needle felt alternative silicone form seal/O-Ring
Filter material:	Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane Ti 08 - Electrostatical conductive polyester fleece, aluminium coated Ti 15 - Polyester fleece Ti 19/2 - Cellulose/polyester carrier with PP meltblown Ti 26 - Glass fibre, laminated other media on request

Cleaning

Cleaning unit:	Multi-jet nozzle (MJD) G1 Rotating wing (RLD)
Cleaning pressure:	MJD 6 bar (max. 7 bar) RLD 3 - 4 bar (max. 4.2 bar)
Differential pressure:	max. 18 mbar
Compressed air consumption:	MJD max. 96 l (fad) RLD max. 80 l (i.N.)
Pressure vessel capacity:	max. 32 l per filter cartridge/cleaning unit

Technical data is subject to change without notice!

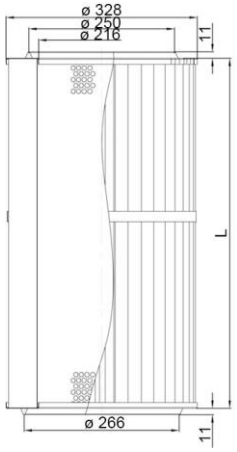
3. Type number key, description and dimensions

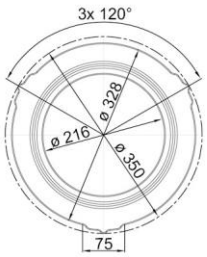
3.1 Type number key

Type	Series	Filter material	Filter surface	Material	Design	
852	781	Ti 15	-10	V4A	FDA	Example

3.2 Description 328 NZ raw gas side

The dust filter cartridge has an opened bottom end cap. It will be raw or clean gas side mounted by means of a tie rod. The dust filter cartridge will be pulled against the filter plate. The upper end plate has three nibs which can lean on the filter plate mounted holding bolts when installing the cartridge We recommend cleaning the dust filter cartridge with the multi-jet nozzle or rotating wing.

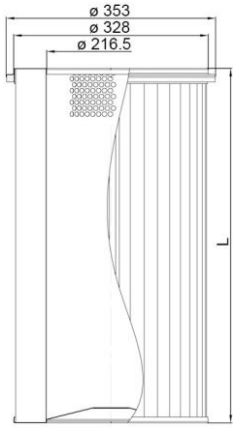




3.3 Description 328 NZC clean gas side

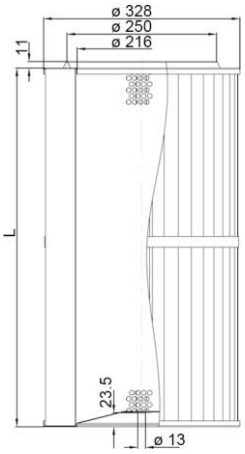
The dust filter cartridge has a closed bottom end cap. It will be raw or clean gas side mounted and fixed with holding down clamps on top of the cartridge. The cartridge have to be pushed through the hole in the filter plate from the clean gas side. To protect the pleats against the filter plate, there is a metal ring (approx. 16 mm high) glued into the end cap. We recommend cleaning the dust filter cartridge with the multi-jet nozzle or rotating wing.

Recommended diameter of the hole in the filter plate for clean gas side mounting is 330 mm.



3.4 Description 328 UZ raw gas side

The dust filter cartridge has a closed bottom end cap with a ø 13 mm hole. The dust filter cartridges are fastened to the filter plate on the dirt side by means of a tie rod (tightening torque approx. 15 Nm). The dust filter cartridge will be fastened via a M12 star handle. We recommend cleaning the dust filter cartridge with the Filtration Group multi-jet nozzle or rotatating wing.

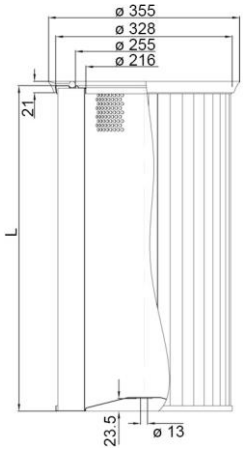


3.5 Description 328 XZ raw gas side

This high-performance dust filter cartridge was developed by Filtration Group for particularly challenging filtration tasks in the food, pharmaceuticals and chemical industries.

This cartridge design facilitates optimum cleaning of the filter cake in conjunction with the Filtration Group rotating wing. Typical dust deposits are virtually eliminated by completely filling the bottom of the end cap, because almost all deposits on the cartridge are drained off during cleaning. The key features here are the Filtration Group rotating wing and the special pleats, which are supported in an innovative way. A special system with form seal is also applied. The unique design of these cartridges permits wet cleaning with the cartridge installed or removed.

The dust filter cartridge has a closed bottom end cap with a ø 13 mm hole. The dust filter cartridges are fastened to the filter plate on the dirt side by means of a tie rod (tightening torque approx. 15 Nm). The dust filter cartridge will be fastened via a M12 star handle.



Several filter media are available for filter elements (see data sheet filter media).

3.6 Dimensions 328 NZ

Type designation	Length L [mm]	Filter surface [m³]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 907 Ti ...	300	3.7/5	510	> 250	80 (160/240)
852 908 Ti ...	600	7.5/10/13	1000		
852 025 Ti ...	660	11/21	1200		
852 909 Ti ...	1000	8/12.5/16	1630		

* Depending on the air to media ratio of 1.7 m³/m² min

** Depending on volume flow and filter media

*** Depending on media/materials, higher temperature ranges on request

3.7 Dimensions 328 NZC

Type designation	Length L [mm]	Filter surface [m³]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 829 Ti ...	300	3.7/5	510	> 250	80 (160/240)
852 781 Ti ...	600	7.5/10	1000		
852 943 Ti ...	1000	12.5/16	1275		

3.8 Dimensions 328 UZ					
Type designation	Length L [mm]	Filter surface [m³]	Max. vol. flow* [m³/h]	Start pressure losst** [Pa]	Max. operating temperature*** [°C]
852 826 Ti ...	300	3.7/5	510	> 250	80 (160/240)
852 782 Ti ...	600	7.5/10/13	1000		
852 020 Ti ...	660	11/21	1200		
852 876 Ti ...	1000	12.5/16	1630		
852 081 Ti ...	1200	15/20	2040		

* Depending on the air to media ratio of 1.7 m³/m² min

** Depending on volume flow and filter media

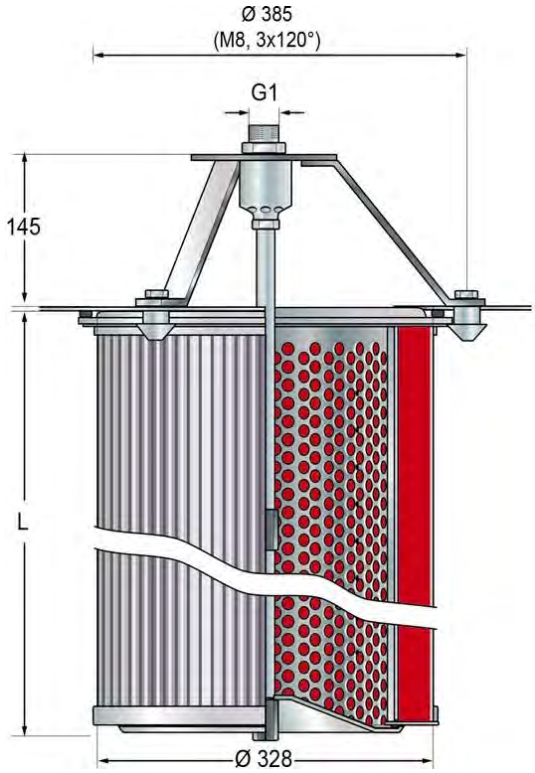
*** Depending on media/materials, higher temperature ranges on request

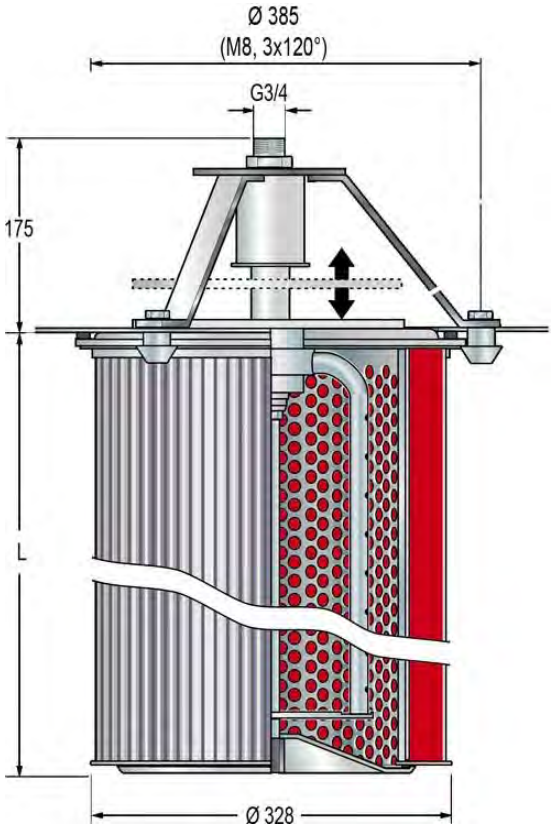
3.9 Dimensions 328 XZ					
Type designation	Length L [mm]	Filter surface [m³]	Max. vol. flow* [m³/h]	Start pressure loss** [Pa]	Max. operating temperature*** [°C]
852 844 Ti ... V4A	600	3/5/10	510	> 250	80 (160/240)
852 979 Ti ... V4A	1000	12,5/8	1275		

4. Installation

4.1 Raw gas side installation

The dust filter cartridges with diameter: 328 mm are fastened to the filter plate on the dirt side by means of a tie rod (tightening torque approx. 15 Nm). Mounting is facilitated by a centre ring.
Recommended diameter of the hole in the filter plate for raw gas side mounting is 214 mm.

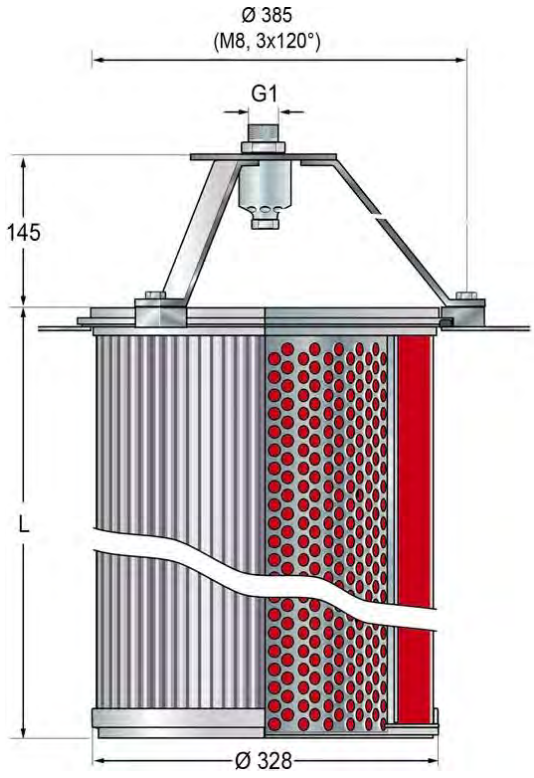


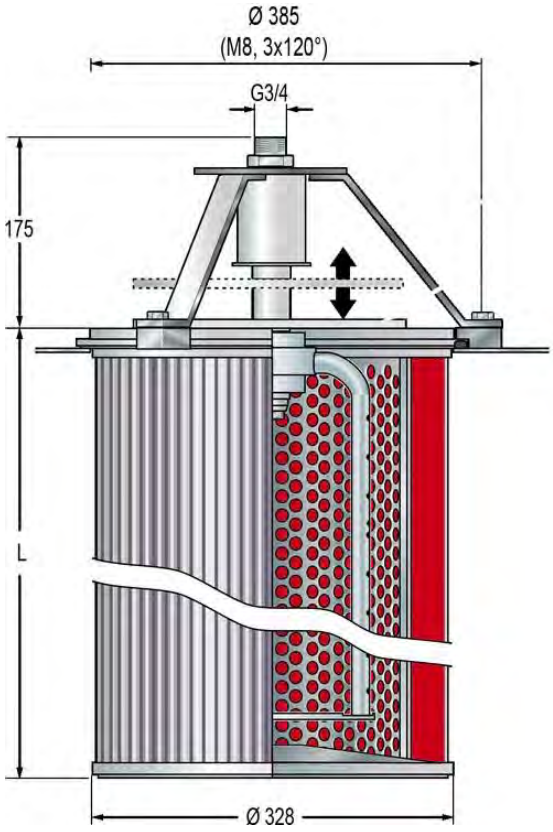


4. 2 Clean gas side installation

Filter cartridges with ø 328 are fastened to the filter plate on the cleaned side by means of retainers.

Recommended diameter of the hole in the filter plate for clean gas side mounting is 330 mm.



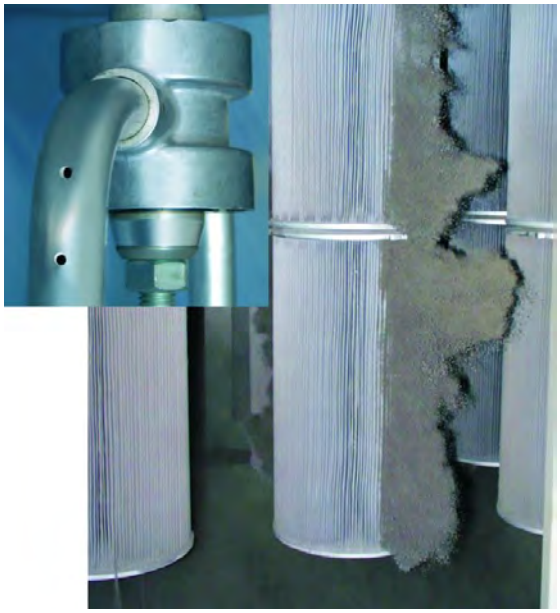


5. Accessories

Order number	Designation
77838568	Centre ring-EL 033, galvanized steel
77934326	Centre ring-EL 033, stainless steel V2A - AISI 304
79743709	Centre ring stainless steel V4A - AISI 316
77885031	Centre ring-2E 033 galvanized steel (2x 852 908 Ti ...)
78215220	Centre ring-2E 033 Edelstahl 1.4301 V2A (2x 852 908 Ti ...)
76161913	Reusable end cap, galvanized steel
76161921	Reusable end cap, stainless steel V4A - AISI 316
79791104	Holding bolts PA6, pack of 3
70357074	Form seal SI 355/255/21
Cleaning unit	Multi-jet nozzle MJD-32 (see data sheet MJD)
Cleaning unit	Rotating wing RLD-32 (see data sheet RLD)

6. Cleaning

Two cleaning systems are available for dust filter cartridges with a diameter of 328 mm



Filtration Group multi-jet nozzle (MJD)
The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level. The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a tripod and various small assembly components. The tripod maintains an optimum distance from the cartridge to ensure maximum cleaning
efficiency.

Filtration Group rotating wing (RLD)
The baffle plate closes during cleaning and the rotating wing begins to turn. The large number of pulsed air jets that are discharged from the wing elements guarantee gentle, uniform cleaning over the complete cartridge length. The simultaneous vibratory movement in the pleats generates a significant improvement in cleaning efficiency, particularly with critical dusts. Each pleat is cleaned several times. The filter life is optimised as a result of the rotating wing.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70562993.04/2019

Dust filter cartridge
328 NZC

Ø 328 mm

1. Features

Star-pleated Filtration Group dust cartridges are used to separate dust from gases. Dusty air or gas impinged to the outside of the cartridges and the cleaned airflow exits at the top. The retained dust can be cleaned with a rotating wing by means of a cleaning pulse or by jet pulse.
Regular and extensive performance testing of all materials used in production is the key to the consistently high quality of Filtration Group dust cartridges. Additional applications tests are carried out both on the test stands in our own development laboratory and on the customer's site. The results of these tests form the backbone of innovative products, mature production methods and unmatched operational reliability.

Characteristics

- High separation efficiency
- Uniform pleat distribution
- Reliable operation
- Large filter surface in a very small space
- Optimised filter materials
- Installation on the clean side
- Worldwide sales

2. Technical Data

Material

Inner core: Galvanized steel (standard)
or stainless steel V4A - AISI 316

End caps: Galvanized steel (standard)
or stainless steel V4A - AISI 316

Seal: PUR soft material

Filter material: Ti 07/1 - Electrostatical conductive polyester Fleece with PTFE membrane
Ti 08 - Electrostatical conductive polyester fleece
Ti 15 - polyester fleece
Ti 19/2 - Cellulose/polyester carrier with PP meltblown
Ti 70 - Cellulose with 30 % polyester fibres
Other filter materials on request

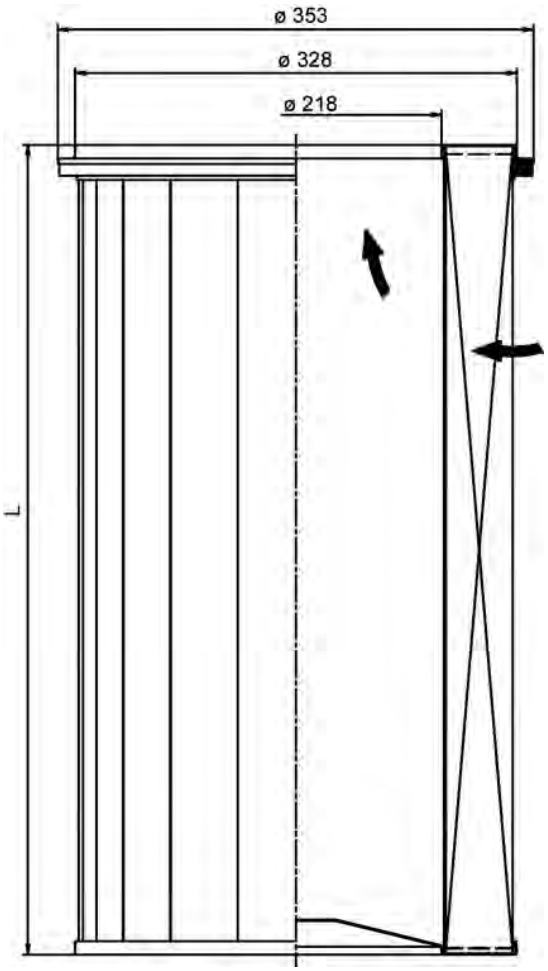
Cleaning

Nozzle: Rotating wing RLD Rein
or multi-jet nozzle G1

Cleaning pressure: 3 bar to 4 bar (max. 4.5 bar)
or 5 bar to 6 bar

Differential pressure: max. 15 mbar

Technical data is subject to change without notice!



3. Order numbers

Order numbers	Type designation	Length L** [mm]	Filter material	Filter surface [m²]	max. volume flow*** [m³/h]	Max. operating temperature [°C]	electro-static-al con-ductive
78386948	852 781 Ti 07-7.5	600	Ti 07/1	7.5	750	80	yes
79394172	852 781 Ti 07-7.5 V4A*						
78361511	852 781 Ti 08-10		Ti 08	10			
77938046	852 781 Ti 15-10		Ti 15				no
79354507	852 781 Ti 19-7.5		Ti 19/2	7.5			
78359788	852 781 Ti 70-13		Ti 70	13			
79355587	852 781 Ti 15-10 Band		Ti 15	10			no
78387920	852 781 Ti 19-7.5 Band		Ti 19/2	7.5			

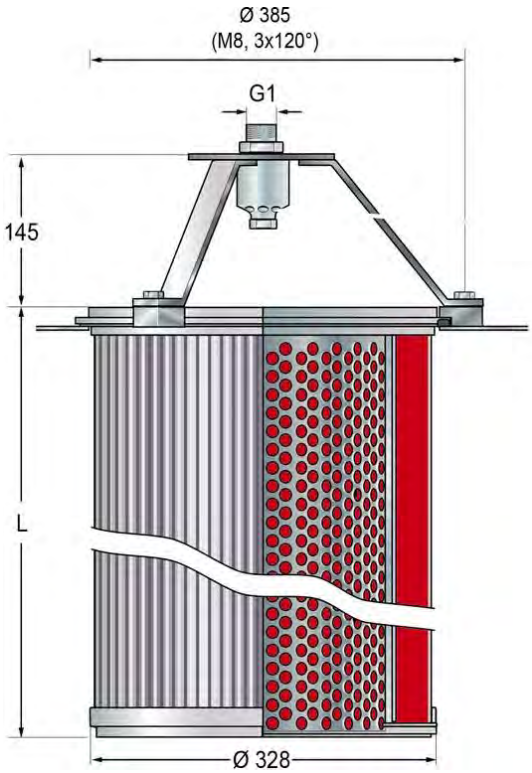
* Version made of stainless steel V4A

** Other cartridge lengths available on request

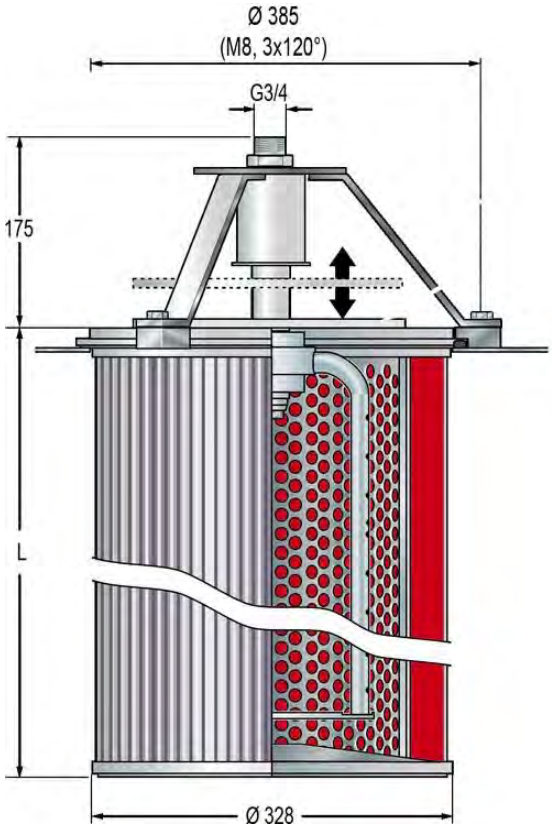
*** These values may vary depending on the nature of the dust and the composition of the gas.

4. Installation

The dust removal cartridges (diameter: 328 mm) are fastened to the filter plate on the clean air side by means of retainers.
A hole with a diameter of 330 mm must be drilled in the filter plate.



Multi-jet nozzle



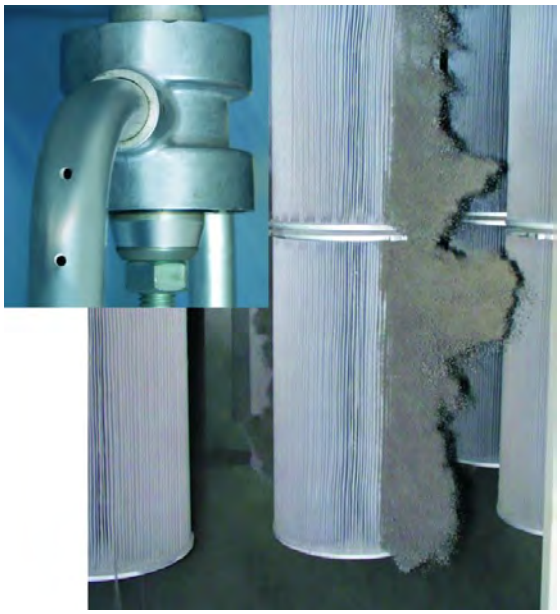
Rotating wing

5. Accessories

Order number	Designation
79356734	Multi-jet nozzle MJD-32 00 Rein A1
78296758	Rotating wing RLD-32 08 Rein A1
78296857	Rotating wing RLD-32 06 Rein V1

6. Cleaning

Two cleaning systems are available for dust filter cartridges with a diameter of 328 mm



Filtration Group multi-jet nozzle

The optimised geometry of the multi-jet nozzle guarantees excellent cleaning results with a significantly lower noise level.
The multi-jet nozzle is available from Filtration Group in aluminium or stainless steel. It can also be purchased as part of the Filtration Group MJD cleaning unit, comprising the nozzle, a tripod and various small assembly components. The stirrup maintains an optimum distance from the cartridge to ensure maximum cleaning efficiency.

Filtration Group rotating wing

The dam plate closes during cleaning and the rotating wing begins to turn. The large number of compressed air jets that are discharged from the wing elements guarantee gentle, uniform cleaning over the complete cartridge length. The simultaneous vibratory movement in the pleats generates a significant improvement in cleaning efficiency, particularly with critical dusts. Each pleat is cleaned several times over. The filter life is optimised as a result of the rotating wing.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70349867.04/2019

Dust filter cartridge
328 XZ

Ø 328 mm, high performance cartridge

1. Features

This high-performance dust filter cartridge was developed by Filtration Group Filtersysteme for particularly challenging filtration tasks in the pharmaceuticals and chemical industries.
This cartridge design facilitates optimum cleaning of the filter cake in conjunction with the Filtration Group rotating wing. Typical dust deposits are virtually eliminated by completely filling the bottom of the end cap, because almost all deposits on the cartridge are drained off during cleaning. The key features here are the Filtration Group rotating wing and the special pleats, which are supported in an innovative way.
The unique design of these cartridges permits wet cleaning with the element installed or removed.

Characteristics

- Washable
- Very high differential pressure stability
- Installation on the dirt side
- Improved cleaning properties
- High load capacity
- Worldwide distribution

2. Technical Data

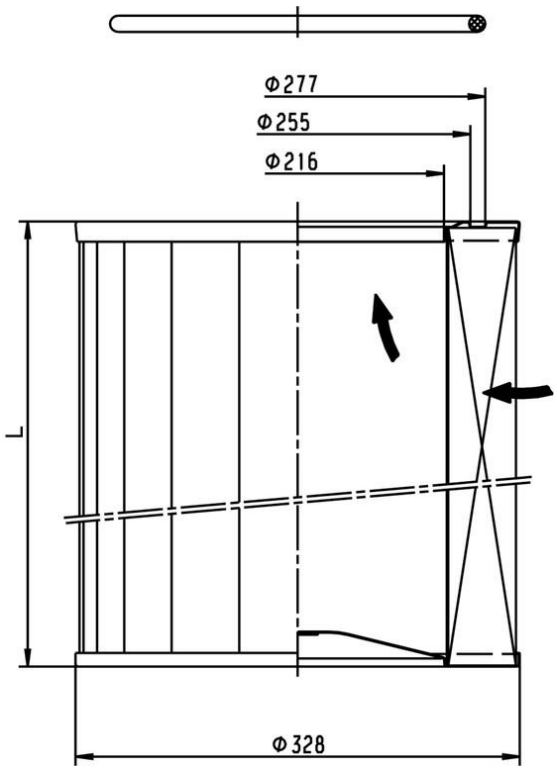
Material

Inner core: Stainless steel V4A - AISI 316
End caps: Stainless steel V4A - AISI 316
Seal: Silicone foam
Filter material: DRG 5N - Stainless steel wire mesh 1.4404
Ti 07/1 - Electrostatical conductive polyester fleece with PTFE membrane
Ti 08 - Electrostatical conductive polyester fleece
Ti 18/1 - Polyphenyl sulphide with PTFE membrane
Ti 56/2 - Polyester fleece with PTFE membrane

Cleaning

Nozzle: Rotating wing
Cleaning pressure: 3 bar to 4 bar
Differential pressure: max. 30 mbar
Compressed air consumption per cleaning pulse: 50 l (fad) for L = 600 mm
100 l (fad) for L = 984 mm
Compressed air reservoir capacity: approx. 16 l per filter cartridge for L = 600 mm
approx. 32 l per filter cartridge for L = 984 mm

Technical data is subject to change without notice!



3. Order numbers

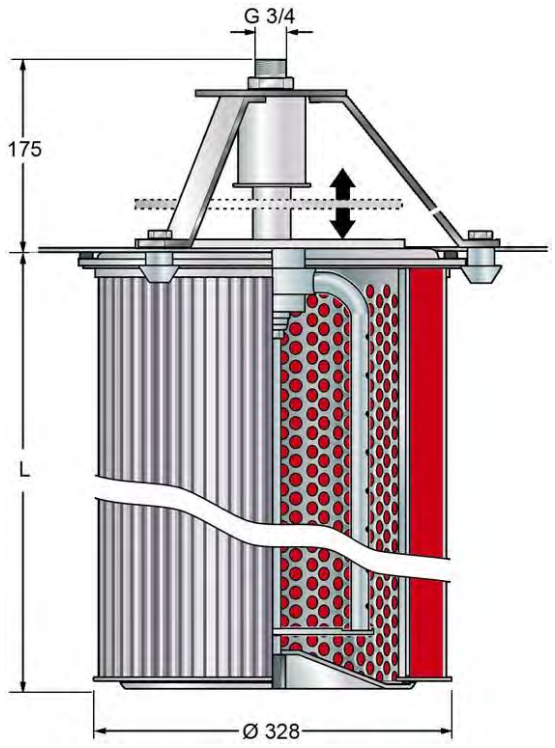
Order number	Type designation	Length L [mm]	Filter material	Filter surface [m²]	Max. vol. flow** [m³/h]	Max. operating temperature [°C]	Electro-statical con-ductive
79747072	852 844 DRG 5N-3 V4A FRV*	600	DRG 5N	3	650	240	yes
78361370	852 844 Ti 07-3 V4A FRV*		Ti 07/1		550	130	
78361388	852 844 Ti 07-5 V4A FRV*	600	Ti 07/1	5	800	130	yes
78215295	852 844 Ti 08-5 V4A FRV*		Ti 08		450		
76105969	852 844 Ti 18-5 V4A FRV*		Ti 18/1		800	160	no
78221376	852 844 Ti 56-5 V4A FRV*		Ti 56/2			130	
76355499	852 979 Ti 07-8 V4A FRV*	984	Ti 07/1	8	1200	130	yes
79749664	852 979 Ti 18-8 V4A FRV*		Ti 18/1			160	no

* Version made of stainless steel V4A - AISI 316 or equivalent with glued pleat backs

** These values may vary depending on the nature of the dust and the composition of the gas.

4. Installation

The dust filter cartridges 852 844/852 979 are fastened to the filter plate on the dirt side by means of a tie bolt (tightening torque approx. 15 Nm). A hole with a diameter of 214 mm must be drilled in the filter plate. Cartridge mounting is facilitated by a centre ring.

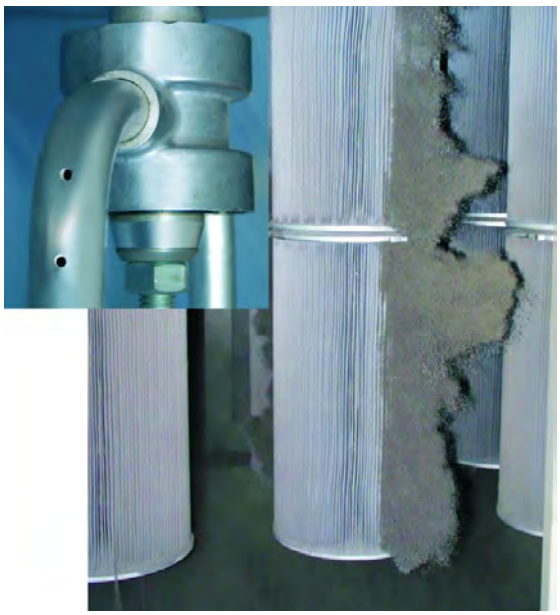


5. Accessories

Order number	Designation
77934326	Centre ring stainless steel V2A - AISI 304
79743709	Centre ring stainless steel V4A - AISI 316
79749631	O-ring silicone 253 mm x 12 mm
79339219	RLD-32 06 ROH V2 - AISI 304
79790064	RLD-32 10 ROH V2 - AISI 304

6. Cleaning

We recommend cleaning the dust filter cartridge with Filtration Group rotating wing RLD.
At begin of the cleaning process the baffle plate closes and the wing starts to rotate. Numerous air jets allow for even, gentle cleaning of the complete cartridge length. The cleaning process is significantly more efficient due to the simultaneous vibration movement in the pleats, particularly important with critical dusts. Each pleat is cleaned repeatedly.
By using the rotating wing the optimal service life of the filter cartridge is guaranteed.



7. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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Dust filter cartridge
Advantage of conical dust filter cartridges

1. Features

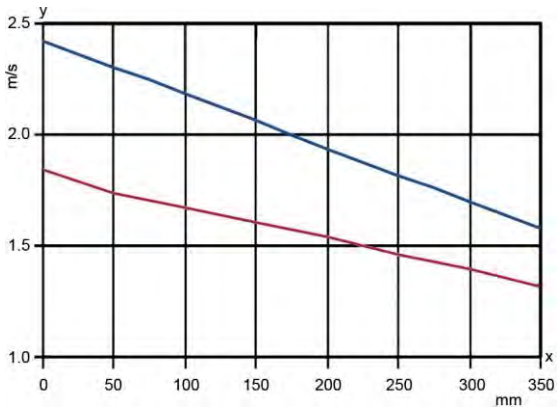
Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from air and gases in nearly all industrial branches. Cylindrical and conical cartridges are offered as standard. The conical geometry offers clear advantages in comparison to cylindrical designs. Conical Filtration Group cartridges improve the performance of a system with only minimal effort.

Characteristics

- 30% larger surface means better dust sedimentation
- Uniform cleaning all the way down to the bottom
- Higher mechanical strength facilitates a more compact system
- Lower filter surface load due to the reduced inflow velocity
- Improved cleaning action extends the cartridge life

2. Course of flow on dirt side

Upstream velocity in dirt side area V = 1200 m³/h, 8 cartridges, diameter of filter housing 530 mm

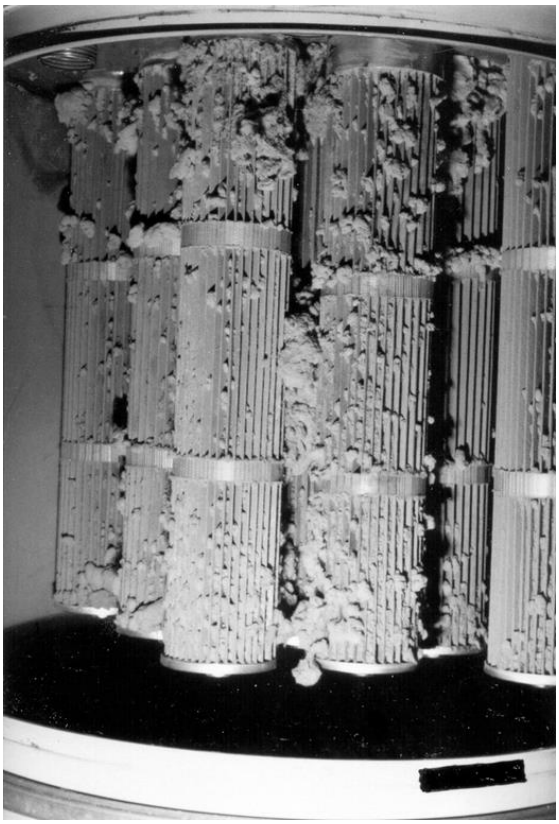


The conical design of the cartridge shows a high reduction of the upstream velocity in the area of the bottom end cap. Through it the element is much better to clean off, especially in use of light dust. The dust can sediment better.
Higher flow from approximately 30 % at compact filter housing is possible.

x = Distance to the bottom end cap in mm
y = Velocity in m/s

Cylindrical cartridge
Conical cartridge

3. Effects in practice – example suction of rare dust



Cylindrical cartridge after 1,170 working hours.
Upper area of cartridges is not cleaned well.

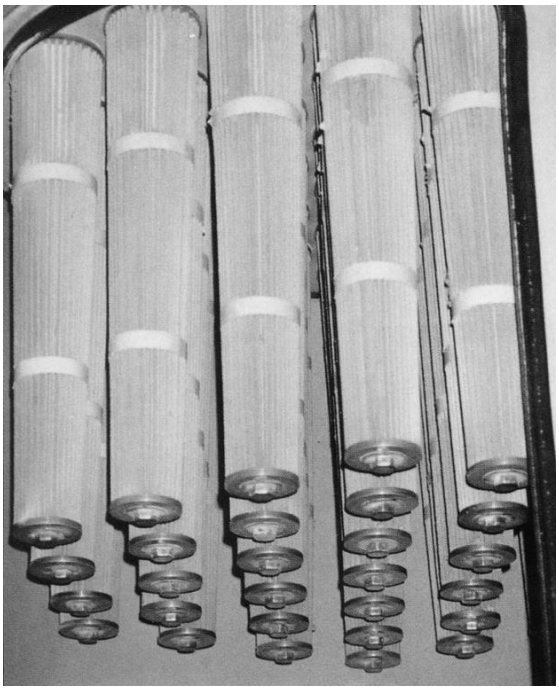
After changing to conical filter cartridges and 4,600 working hours..
Cartridges cleaned over the whole length.

4. Technical Data

For example sand plasting, V = 1200 m³/h, diameter of housing 530 mm

Cartridge diameter in mm	120	120	115
Cartridge design	conical	cylindrical	cylindrical
Connection	RD 72	RD 72	RD 60
Filter area per cartridge in m²	1.6	1.6	1.3
Filter area complete in m²	12.8	12.8	10.4
Filter surface load in m/min	1.56	1.56	1.92
Free area in %	82	59	62
Velocity between bottom end caps in m/s	1.84	2.56	2.42
Velocity on top end cap (RD connection) in m/s	7.15	7.15	14.75
Volume, clean side, cartridge in l	3.23	6.08	3.63

Subject to technical changes without prior notice.



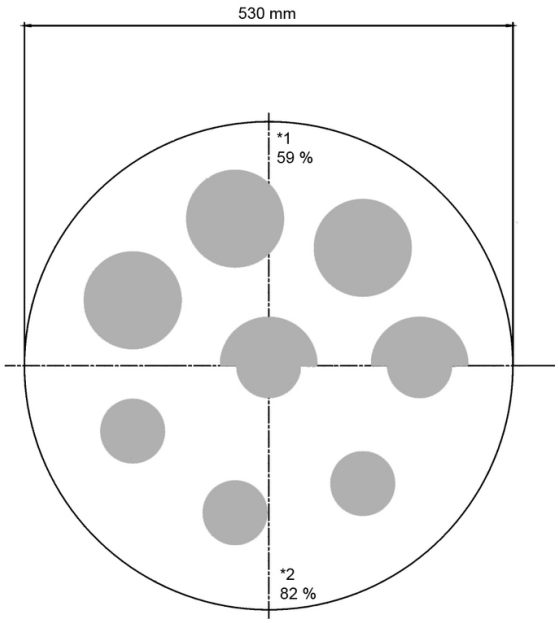
Out of these values the following advantages for the conical cartridges result:

High capacity
(approx. 19 % more filter surface in comparison to cylindrical cartridges with diameter 115 mm)

Better dust sedimentation
(smaller area of the bottom end caps)

More efficient cleaning
(lower volume in comparison to the cylindrical cartridge)

Less flow resistance
(an increased outlet area size at the upper end cap in comparison to cartridges with RD 60 connection)



*1 = Cylindrical cartridges with 59 % free area
*2 = Conical cartridges with 82 % free area

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Miofilter
Filter cartridge/Panel filter

1. Features

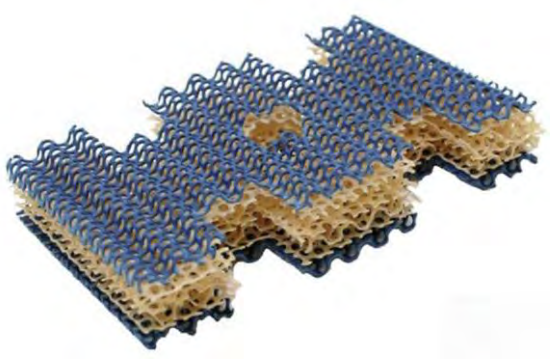
Miofilter products are mainly used for pre-filtration of air intake filtration for air conditioning systems and electrical engines in train applications. In that case, Miofilter products protect the second filter systems from rough pollution and atmospheric influences such as snow ice or leaves.
Miofilter are utilized as round shaped filter cartridges of filter cells (panel filters). They consist of different layers with undulated and perforated filter media, which is moulded in PU end caps or fixed into special metal frames.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.

Characteristics

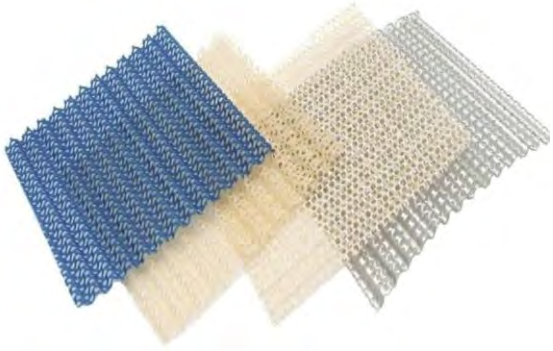
- High retention rate along with low differential pressure
- Filter system with a very high load capacity (velocity up to 4 m/s)
- Cleanable filter systems leading to high durability
- Resistance against atmospheric conditions
- Resistance against high temperatures (up to 400°C)
- Very easy handling and installation
- Simple and rugged construction
- Very high degree of efficiency
- Low amount of maintenance
- Worldwide distribution

2. Filter media

Miovyl
Multilayered filter media made of perforated plastic
Equably layered (standard filter)
90° shifted layers to improve filtration characteristics (AL filter)
Temperature resistant up to 70 °C
Fire resistance M1



Mioval
Multilayered filter media made of perforated aluminum
Equably layered (standard filter)
90° shifted layers to improve filtration characteristics (AL filter)
Temperature resistant up to 120 °C, with a special sealing compound or in a metal frame up to 400 °C
Fire resistance M0



3. Applications

Pre-filtration of air intake filtration for electrical engines

Pre-filtration of air intake filtration for air conditioning systems

Pre-filtration of air intake filtration for air conditioning systems

View of the different filtration efficiency levels

View of the different filtration efficiency levels while installed

4. Design

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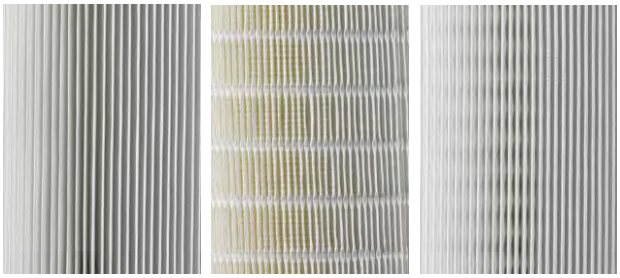
70562513.04/2019

Dust filter cartridge
Pleat distance control

special pleat distance control for polyester and cellulose based filter media

1. Features



Star-pleated Filtration Group dust filter cartridges are used to separate very fine particles from gases. The gas flows inward through the cartridge and is discharged via the open end cap on the top.
Due to the new Filtration Group pleat distance control for polyester and cellulose based filter media, the performance of the Filtration Group polyester cartridges increase up to 44 %, compared with standard polyester cartridges on the market. The improved cleaning effect and the optimized flow conditions are leading the performance to a very high level and to a maximum durability of the filter media of the cartridge.
The cleaning effect is highly improved by the engrained ridges/pleat lock of the filter media. Pleat blocking isn´t possible anymore, the air permeability and the air volume flow will be constantly to an extremely high level to get less differential pressure during the process.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavour to mature and perfect our products. Applications tests both on the customer´s side and in our own facilities form the backbone of affortable and reliable products.

Characteristics

- Very high retention rate with less differential pressure
- Polyester and cellulose based filter media
- Perfect pleat allocation, due to the pleat distance control with ridges and pleat-lock
- Very high durability
- Very high cleanability
- Maximum useable filter surface
- Very high efficiency
- Very low maintenance necessary
- Worldwide distribution

2. Pleat distance control versions

Standard pleat distance control for polyester based filter media

- Very good and constant pleat allocation by the use of a pleat distance hot melt rope on the backside of the pleats
- Improved cleaning effect of the filter cartridges with less differential pressure and high durability
- Increased stability of the pleats with a pleat depth of 50 mm
- Applicable process for cartridges with a pleat depth of 50 mm and a length up to 1200 mm
- Applicable process for polyester based filter media Ti 08 and Ti 15

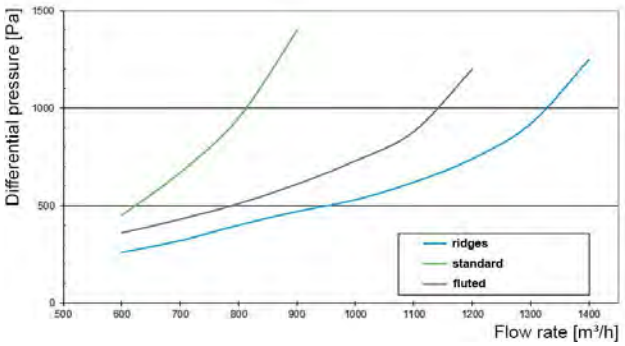
Pleat distance control with ridges for polyester based filter media

- Perfect and constant pleat allocation by the use of ridges for polyester based filter media
- Best cleaning effect of the filter cartridges with less differential pressure and very high durability
- Maximum stability of the pleats with a pleat depth of 50 mm
- Applicable process for cartridges with a pleat depth of 50 mm and a length up to 800 mm
- Applicable process for polyester based filter media Ti 08 and Ti 15

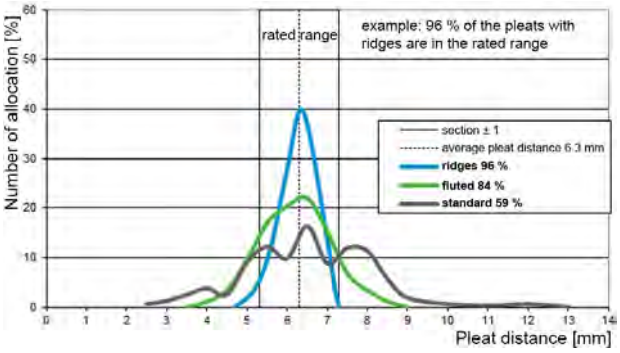
Pleat distance control with Pleat-Lock for cellulose based filter media

- Perfect and constant pleat allocation by the use of engrained lenses ((Pleat-Lock)) for cellulose based filter media
- Usage of the complete filter surface for cartridges with a pleat depth of 50 mm
- Best cleaning effect of the filter cartridges with less differential pressure and very high durability
- Maximum stability of the pleats with a pleat depth of 50 mm
- Applicable process for cartridges with a pleat depth of 50 mm and a length up to 800 mm
- Applicable process for cellulose based filter media Ti 10 and Ti 85

3. Comparison of performance and pleat allocation



Comparison of differential pressure development on load with fluted filter media, with and without the pleat distance control with the Filtration Group technology of ridges



Comparison of the pleat allocation between the pleat distance controls of fluted filter media and with or without the Filtration Group technology of ridges

4. Design

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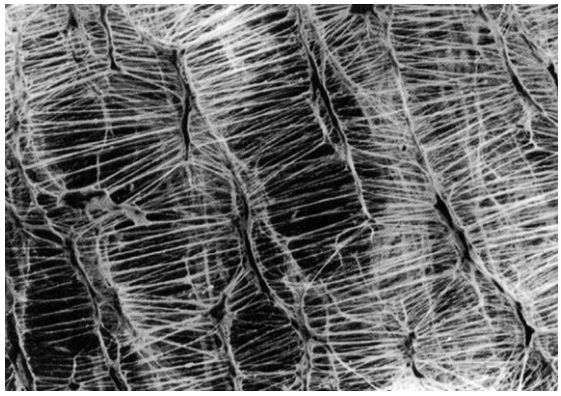
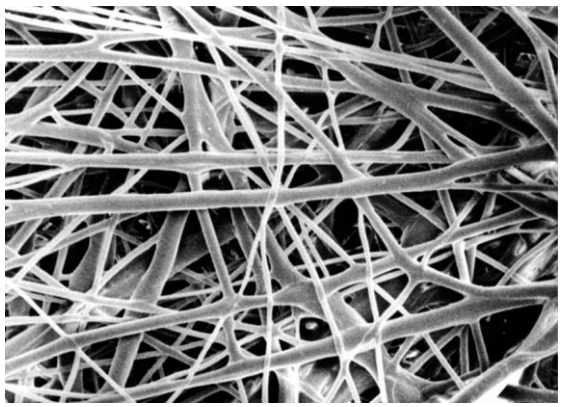
Filter media
Overview

1. Features

Filtration Group offers a wide selection of filter media for dust filter elements. This ensures that the right solution can be found for nearly every application.
Special filter media with PTFE membranes, meltblown micro fibre fleece or Web coatings guarantee optimal costs and reliable long-term operation of dust collector systems.
Media conform to EU regulations and FDA requirements are available for the pharmaceutical and food industries.





2. Table

Type	Media	electro-stat. con-ductive	Test certificate/ Dust class	FOOD EU 10/2011 + FDA	Air perme-ability [m³/m²h] Δp 200 Pa	max. operating tempe-rature [°C]	Properties/ Applications
Ti 07/1	Polyester fleece with PTFE membrane	yes	DIN EN 60335-2-69 "M" EN 1822-3 "E10"	yes	145	130 (perm.) 150 (peaks)	Hazardous areas, electrostatically chargeable dusts, high load, difficult fine dusts
Ti 08	Polyester fleece, aluminium coated	yes	DIN EN 60335-2-69 "M"	yes	580	130 (perm.) 150 (peaks)	Hazardous areas, electrostatically chargeable dusts, chemical and food industry
Ti 10	Cellulose with polyester fibres	no	DIN EN 60335-2-69 "M" EN 779 "F9"	no	760	90 (perm.)	High air permeability and stability because of hydrophobe properties, gas turbines
Ti 15	Polyester fleece	no	DIN EN 60335-2-69 "M" EN 779 "F8"	yes	580	130 (perm.) 150 (peaks)	High stability, chemical resistance, washable, food industry, gas turbines
Ti 18/1	Polyphenyl sulphide with PTFE membrane	no	DIN EN 60335-2-69 "M" EN 1822-3 "E10"	yes	200	160 (perm.) 190*	Very good separation, difficult fine dusts, high chemical resistance to organic solvents, alkalis and acids
Ti 19/2	Cellulose/polyester carrier with PP melt-blown	no	DIN EN 60335-2-69 "M" EN 779 "F9"	no	1230	90 (perm.)**	Very good separation, difficult fine dusts, high air permeability, high load
Ti 26	Glass fibre, laminated	no	DIN EN 60335-2-69 "H" EN 1822-3 "H14"	yes	90	90 (perm.)	Separation of airborne particulates, secundary filter (not cleanable), high separation
Ti 35	Polypropylen (PP)	no	DIN EN 60335-2-69 "L"	yes	1080	80 (perm.)	Very good chemical resistance and against hydrolysis, wash-able, high air permeability, food industry
Ti 56/2	Polyester fleece with PTFE-membrane	no	DIN EN 60335-2-69 "M" EN 1822-3 "E10"	yes	250	130 (perm.) 150 (peaks)	Very good separation, difficult fine dusts, high load, washable, food industry
Ti 69	Polyester fleece, oil and water-repellent	no	DIN EN 60335-2-69 "L"	no	630	130 (perm.) 150 (peaks)	High air permeability, very good cleanable, high stability, oil and water-repellent
Ti 70	Cellulose with 30 % polyester fibres	no	DIN EN 60335-2-69 "M"	no	450	120 (perm.)	Good cleanable, ecologically harmless fabrication, improved wet strength
Ti 201	Polyester fleece with polyester nano fibres (M-Web)	no	DIN EN 60335-2-69 "M"	no	540	130 (perm.) 150 (peaks)	Good cleanable, high separation ratio at poor pressure drop, washable
Ti 202	Polyester fleece with PTFE membrane	no	DIN EN 60335-2-69 "M"	no	250	130 (perm.) 150 (peaks)	Very good separation, high load, washable
Ti 205	Cellulose with 20 % polyester fibres	no	DIN EN 60335-2-69 "M"	no	560	90 (perm.)	High air permeability and stability because of hydrophobe proper-ties, flame-retardant

* with reduced oxygen content

** only dry air

2. Table

Type	Media	electro-stat. con-ductive	Test certificate/ Dust classe	FOOD EU 10/2011 + FDA	Air perme-ability [m³/m²h] Δp 200 Pa	max. operating tempe-rature [°C]	Properties/ Applications
Ti 206	Cellulose with polyester fibres (M-Web)	no	DIN EN 60335-2-69 "M"	no	650	90 (perm.)	High air permeability and stability because of hydrophobe properties, good cleanable, high separation ratio at poor pressure drop, flame-retardant
Ti 2011	Polyester fleece with with stainless steel fibres and PTFE membrane	yes	DIN EN 60335-2-69 "M" EN 1822-3 "E10"	yes	180	130 (perm.)	Hazardous areas, electrostatically chargeable dusts, high stability, very good cleanable, high load, difficult fine dusts, food/ pharmaceutical and chemical industry
DRG5N	Stainless steel wire mesh 1.4404	yes		yes	900	240 (perm.) 260 (peaks)	Fine separation, food and pharmaceutical industry, washable

* with reduced oxygen content
** only dry air

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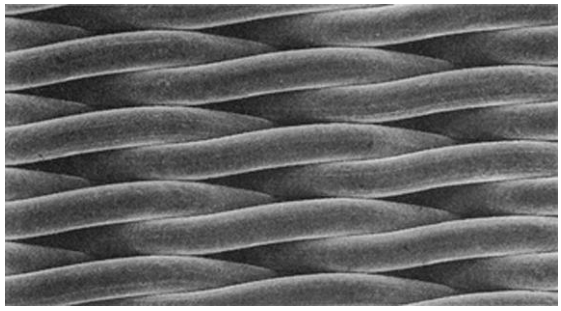
70356135.04/2019

Filter media
DRG 5N

Stainless steel wire mesh 1.4404

1. Features

A special form of surface treatment has been used to obtain a very smooth, finely separating filter media. The wire mesh structure of DRG 5N permits wet cleaning without removing the cartridge.
This media is preferred for use in cleanable dust filters installed in dry dust removal applications in the food processing and pharmaceuticals industries.



Characteristics

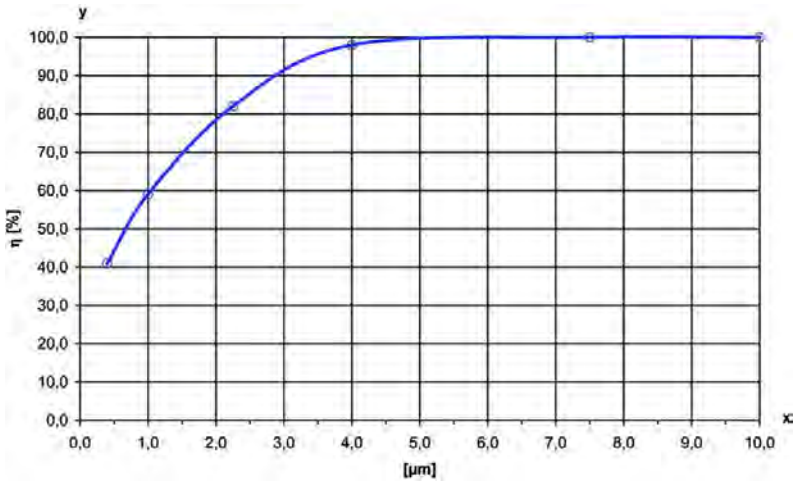
- Smooth surface
- Electrically conductive
- Good separation efficiency
- Excellent cleaning power
- Good cleanability
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]
DRG 5N	Stainless steel wire mesh 1.4404	0.15	750	900 at Δp 200 Pa	240 (permanent) max. 260 (peaks)

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficiency :	> 98 % at 5 µm
Test conditions	
Filter surface load:	3.36 m³/m²^min
Mass concentration:	200 mg/m³ Dolomit
Test dust:	DRB 20 (Rock flour)
Electrical resistance:	< 4 x 10^4 Ω

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity	x				Surface quality (smoothness)	x		
Hydrolysis	x				Stability			x
Acids		x			Abrasion resistance		x	
Alkalis	x				Cleanability (jet pulse)		x	
Solvents	x				Washability	x		

These properties are of purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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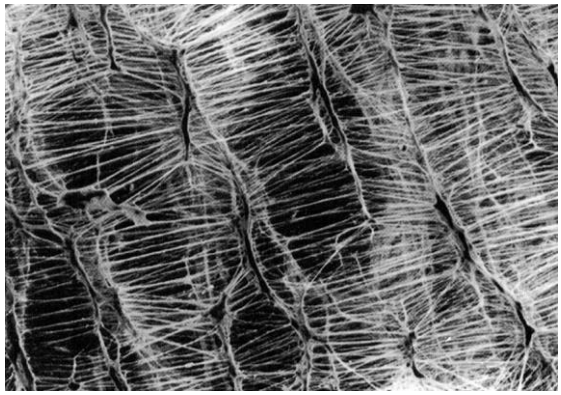
70341997.06/2019

Filter media
Ti 07/1

Polyester fleece with PTFE membrane, electrostatic conductive

1. Features

This pioneering filter media combines a newly developed, electrostatic conductive polyester media with a PTFE membrane. Statically charged particles transfer their charge via the membrane to the conductive polyester media. Ti 07/1 is a composite media that makes the advantages of surface filtration accessible to applications in hazardous areas.



Characteristics

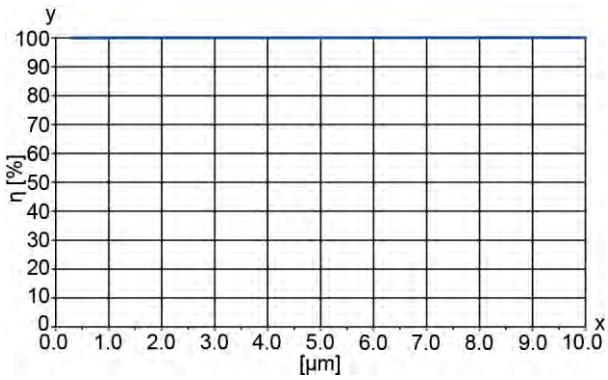
- Specially designed for filtering electrostatically chargeable and explosive fine dusts
- Efficient surface filtration thanks to the microporous PTFE membrane
- High mechanical strength
- Very smooth, fibre-free surface
- Compliance with the requirements of DIN EN 60335-2-69/ Dust class "M" and EN 1822-3 class E10 at v ≤ 1m/min
- Filter media ist conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1550 requirements
- Electro statical behaviour testes acc. to DIN EN 54345 Part 1 and 5
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 07/1	electrostatic conductive polyester fleece with PTFE membrane	0.65	265	150 at Δp 200 Pa	130 (permanent) max. 150 (peaks)	DIN EN 60335-2-69 "M" EN 1822-3 "E10"

Technical data is subject to change without notice!
Electrostatic resistance according to DIN EN 54345 Part 1 and 5: < 1 x 10^6 Ω

3. Filtration efficiency



Filtration efficiency: > 99.99 %
at 0.3 µm

Test conditions
Filter surface load: 3.36 m³/m²^min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)	x		
Hydrolysis			x		Stability	x		
Acids		x			Abrasion resistance			x
Alkalis			x		Cleanability (jet pulse)	x		
Solvents		x			Washability		x	

These properties are of purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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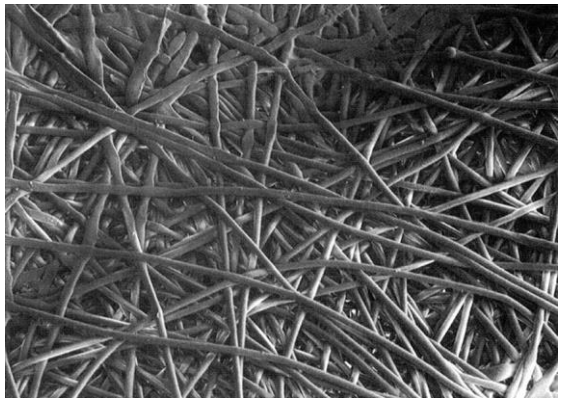
70341999.06/2019

Filter media
Ti 08

Polyester fleece, aluminium coated, electrostatic conductive

1. Features

The polyester fibres on the inflow side (dirt side) have a thin aluminium coating that gives the Ti 08 filter media an electrically conductive surface. This coating is inseparable from the substrate and has no influence on the porosity of the media. Ti 08 is a very economical solution in all dust removal applications where static charges in the dust filter cake have to be eliminated.



Characteristics

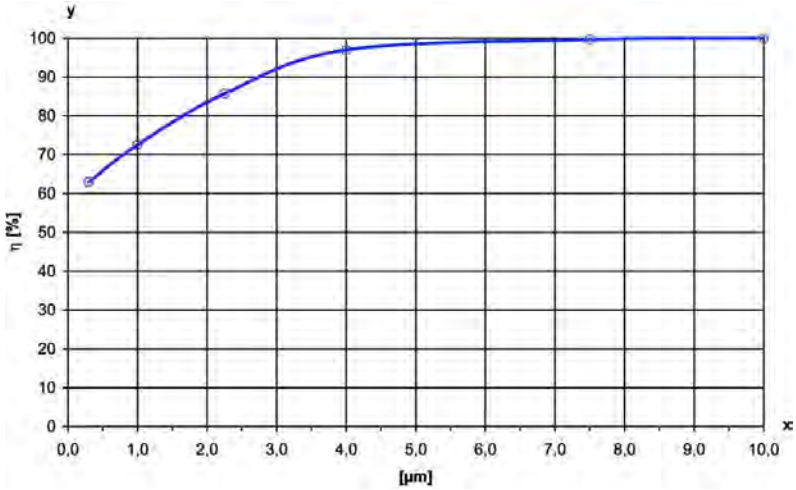
- Smooth surface
- Electrostatic conductive
- Good separation efficiency
- Excellent cleaning power
- Good cleanability
- Compliance with the requirements of DIN EN 60335-2-69/ Dust class "M"
- Filter media ist conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1630 requirements
- Electro statical behaviour testes acc. to DIN EN 54345 Part 1 and 5
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 08	Polyester fleece, aluminium coated, electrostatic conductive	0.6	260	580 at Δp 200 Pa	130 (permanent) 150 (peaks)	DIN EN 60335-2-69 "M"

Technical data is subject to change without notice!
Electrostatic resistance according to DIN EN 54345 Part 1 and 5: < 1 x 10^6 Ω

3. Filtration efficiency



Filtration efficiency:	> 98 %
	at 4 µm
Test conditions	
Inflow velocity:	3.36 m/min
Mass concentration:	200 mg/m³
Test dust:	Dolomit DRB 20 (Rock flour)

x = Particle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)	x		
Hydrolysis			x		Stability	x		
Acids			x		Abrasion resistance	x		
Alkalis			x		Cleanability (jet pulse)		x	
Solvents		x			Washability		x	

These properties are of purely qualitative valuation and depending on the nature of dust, composition of gas and operating conditions (e.g. temperature).

5. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70342001.04/2019

Filter media
Ti 10

Cellulose with polyester fibres

1. Features

The cellulose/polyester fibre blend chosen for this filter media is characterised by high air permaeability and stability as well as very good hydrophobicity. The media combines efficient operation with a low pressure loss.
Ti 10 is consequently ideal for filtering the intake air of gas turbines.

Characteristics

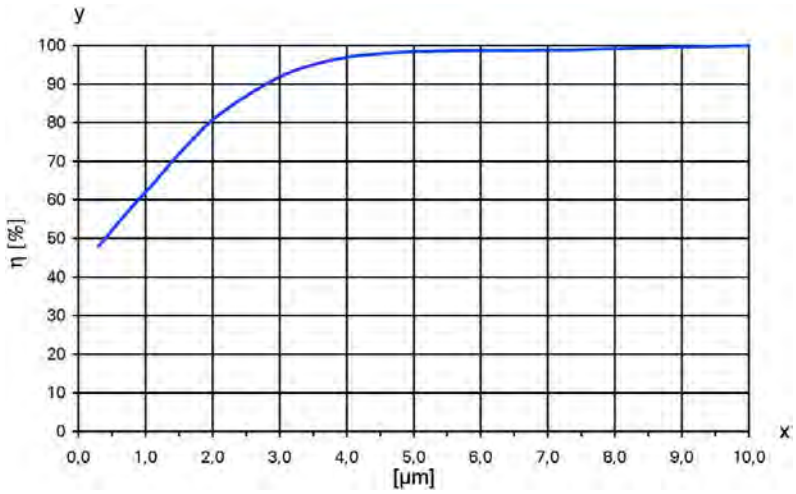
- Humidity resistant
- Low pressure loss
- Long service life
- Efficient operation
- Compliance with the requirements of DIN EN 60335-2-69/ Dust class "M" and EN 779 "F9"
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 10	Cellulose with polyester fibres	0.5	110	760 at Δp 200 Pa	90 (permanent)	DIN EN 60335-2-69 "M" EN 779 "F9"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficiency: > 98 %
at 5 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smooth-ness)		x	
Hydrolysis		x			Stability		x	
Acids			x		Abrasion resistance			x
Alkalis		x			Cleanability (jet pulse)		x	
Solvents		x			Washability			x

These properties are of purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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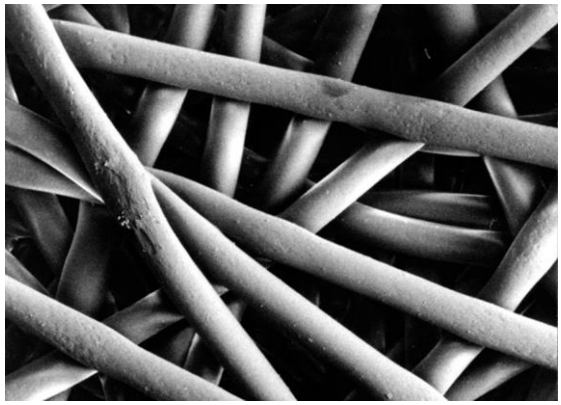
70342003.04/2019

Filter media
Ti 15

Polyester fleece

1. Features

Ti 15 is a specially optimised polyester filter media offering improved separation efficiency in combination with high air permeability.
The media combines efficient operation with a low pressure loss. That is the reason why Ti 15 is also ideal for filtering the intake air of gas turbines.
The media owes its remarkable stability to the thermoplastic solidification process. No binder is necessary - which is why Ti 15 is also good for many applications in the food processing industry.



Characteristics

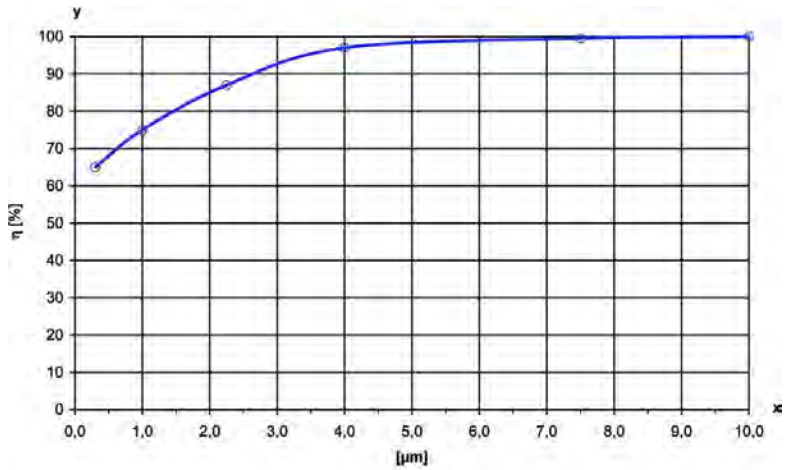
- High mechanical strength (elongation at break 70 %)
- Smooth surface
- Good cleanability
- Resistant to a large number of chemicals
- Thermoplastic binding, no binders can be dispensed
- Hydrophobic properties abetting wet cleaning
- Compliance with the requirements of DIN EN 60335-2-69/ Dust class "M" and EN 779 "F8"
- Filter media is conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1630 requirements
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 15	Polyester fleece	0.6	260	580 at Δp 200 Pa	130 (permanent) 150 (peaks)	DIN EN 60335-2-69 "M" EN 779 "F8"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficiency: > 98 %
at 4 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20
(Rock flour)

x = Particle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)	x		
Hydrolysis			x		Stability	x		
Acids		x			Abrasion resistance	x		
Alkalis			x		Cleanability (jet pulse)		x	
Solvents		x			Washability		x	

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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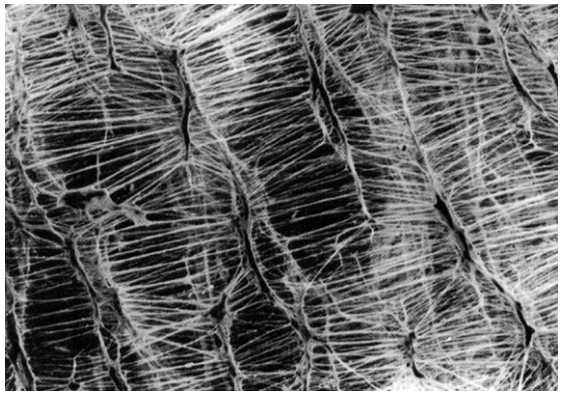
70342005.04/2019

Filter media
Ti 18/1

Polyphenyl sulphide with PTFE membrane

1. Features

The two-layer structure of this filter media enables the maximum benefit of the surface filtration.
The fine-pored PTFE membrane separates almost all the dust on the membrane surface.
Especially challenging filtration tasks will be solved with a long service life. Polyphenyl sulphide with a PTFE membrane combines very good filtration efficiency with good cleanability. It also boasts good chemical and temperature resistance as well as excellent resistance to hydrolysis.



Characteristics

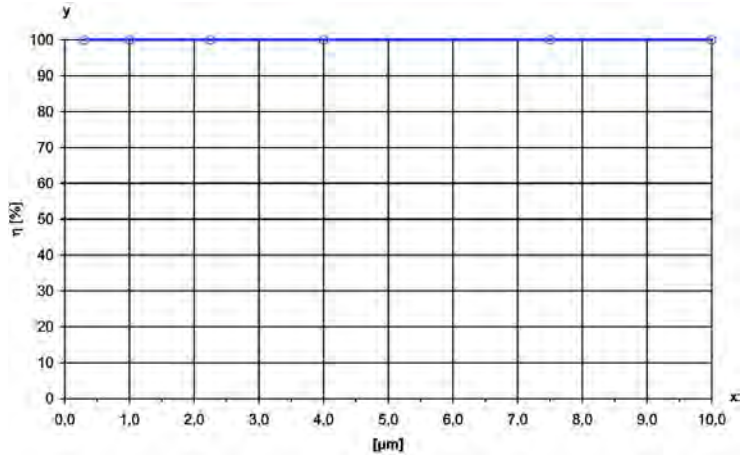
- Efficient surface filtration thanks to microporous PTFE membrane
- High mechanical strength
- Very good chemical resistance to acids, alkalis and organic solvent vapours
- Very smooth, fibre-free surface
- Excellent resistance to hydrolysis
- Good cleanability
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M" and EN 1822-3 class "E10" at v ≤ 1m/min
- Filter media is conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1550 requirements
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 18/1	Polyphenyl sulphide with PT-FE membrane	0.7	250	200 at Δp 200 Pa	160 (permanent) 190 *	DIN EN 60335-2-69 "M" EN 1822-3 "E10"

* With reduced oxygen content. Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficiency: > 99.99 %
at 0.3 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20
(Rock flour)

x = Particle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity	x				Surface quality (smoothness)	x		
Hydrolysis	x				Stability	x		
Acids	x				Abrasion resistance			x
Alkalis	x				Cleanability (jet pulse)	x		
Solvents	x				Washability		x	

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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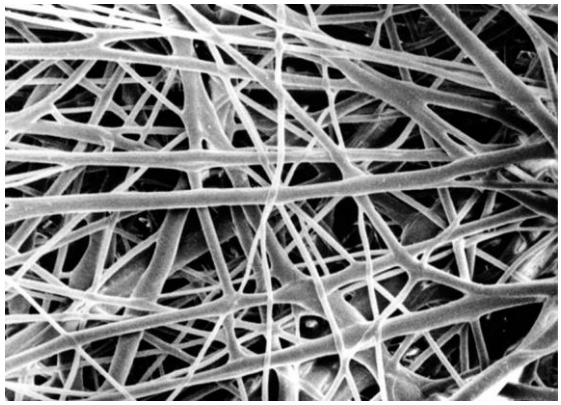
70342007.04/2019

Filter media
Ti 19/2

Cellulose/polyester carrier with Polypropylen meltblown

1. Features

The Ti 19/2 filter media is an optimally designed composite media for cleanable, pleated dust filter cartridges. Its thin, fine-pored, meltblown microfibre layer assures maximum separation as well as a low air resistance.
The excellent filtration and cleaning properties are the outcome of the small fibre diameter (approximately 2 µm) achieved with the meltblown process.
The stable, coarse-pored substrate gives the media the required strength. Ti 19/2 is especially suitable for separating dusts with high fine fraction.



Characteristics

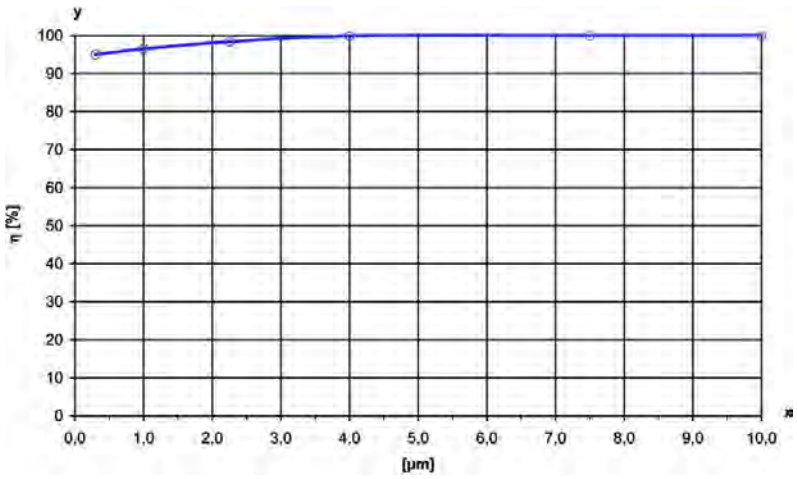
- High porosity and hence a low pressure loss
- Excellent cleanability because the filter layer is made of polypropylene meltblown
- Good chemical and hydrolysis resistance up to the permanent operating temperature
- High filtration efficieny
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M" and EN 779 "F9"
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 19/2	Cellulose/polyester carrier with polypro-pylen meltblown	0.85	210	1230 at Δp 200 Pa	90 (permanent) *	DIN EN 60335-2-69 "M" EN 779 "F9"

* Only in dry air. Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficiency: > 99 %
at 2 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Partcle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)		x	
Hydrolysis		x			Stability	x		
Acids			x		Abrasion resistance			x
Alkalis		x			Cleanability (jet pulse)	x		
Solvents			x		Washability			x

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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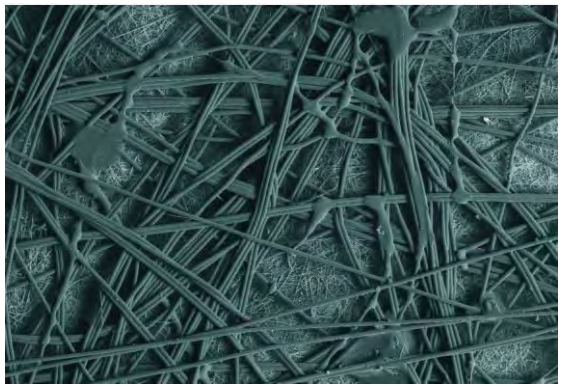
70342009.04/2019

Filter media
Ti 26

Glass fibre, laminated on both sides with PET

1. Features

The filter material Ti 26 consists of a micro glass fibre fleece with polyester spun-bonded fleece laminated on both sides. This results in improved resistance and stiffness of the material.
Ti 26 is characterized by a high retention of the particulate material. Filter elements made of this material are generally used as secondary filters that cannot be cleaned.



Characteristics

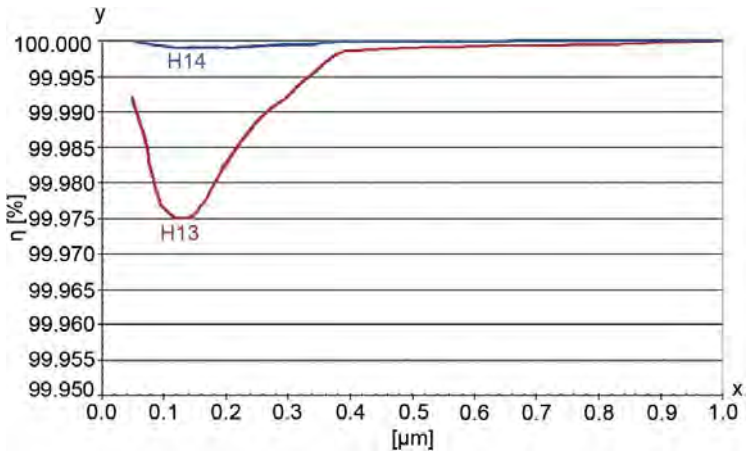
- Very high separation efficiency
- High mechanical strength
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "H" and EN 1822-3 class "H14" at v ≤ 1m/min
- Filter media is conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1630 re quirements
- Worldwide distribution

2. Technical data

Type	Material	Material thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 26	Glass fibre, laminated on both sides with PET	0.70	230	95 at Δp 200 Pa	120 (permanent)	DIN EN 60335-2-69 "H" EN 1822-3 "H14"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficieny:

H13 at v = 3.5 m/min > 99.95 % at 0.1 µm

H14 at v = 1 m/min > 99.995 % at 0.1 µm

Test conditions

Mass concentration: 200 mg/m³

Test dust: DEHS

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)		x	
Hydrolysis			x		Stability	x		
Acids		x			Abrasion resistance		x	
Alkalis			x		Cleanability (jet pulse)			x
Solvents		x			Washability			x

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70342011.05/2019

Filter media
Ti 35

Polypropylene

1. Features

Ti 35 is a specially optimised polypropylene filter media offering high separation efficiency in combination with high air permeability.
The media owes its enhanced stability to the thermoplastic solidification process. No binder is necessary - therefore you can use Ti 35 for applications in the food processing industry.
The structure of Ti 35 polypropylene filter media entails a very good chemical resistance in a lot of applications.

Characteristics

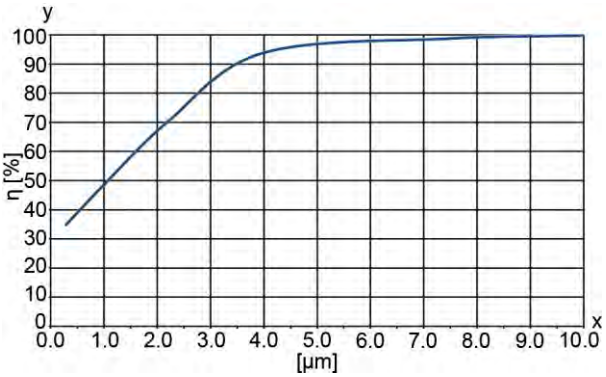
- Very good resistance against hydrolysis
- Smooth surface
- Good cleanability
- Resistant to a large number of chemicals
- Thermoplastic binding, no binders can be dispensed
- Hydrophobic properties abetting wet cleaning
- Compliance with the requirements of DIN EN 60335-2-69/ Dust class "L"
- Filter media is conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1520 requirements
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 35	Polypropylene	0.7	200	1080 at Δp 200 Pa	80	DIN EN 60335-2-69 "L"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficiency:	> 98 %
	at 6 µm
Test conditions	
Inflow velocity:	3.36 m/min
Mass concentration:	200 mg/m³
Test dust:	Dolomit DRB 20
	(Rock flour)

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity	x				Surface quality (smoothness)	x		
Hydrolysis	x				Stability		x	
Acids		x			Abrasion resistance	x		
Alkalis		x			Cleanability (jet pulse)		x	
Solvents	x				Washability		x	

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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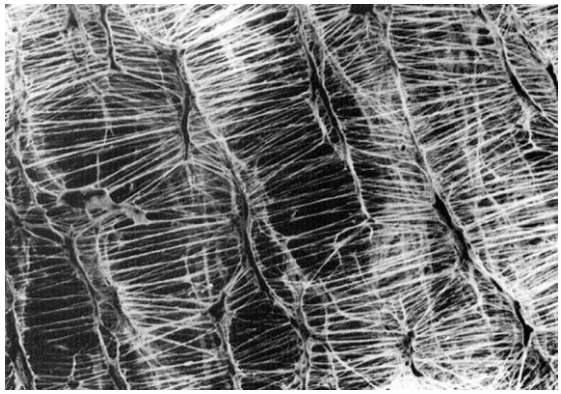
70522334.04/2019

Filter media
Ti 56/2

Polyester fleece with PTFE membrane

1. Features

The two-layer structure of this filter media enables the maximum benefit of the surface filtration.
The fine-pored PTFE membrane separates almost all the dust on the membrane surface. Owing to its very smooth, fibre-free surface, Ti 56/2 is especially suitable for cleanable dust filter cartridges. Especially challenging filtration tasks will be solved with a long service life.



Characteristics

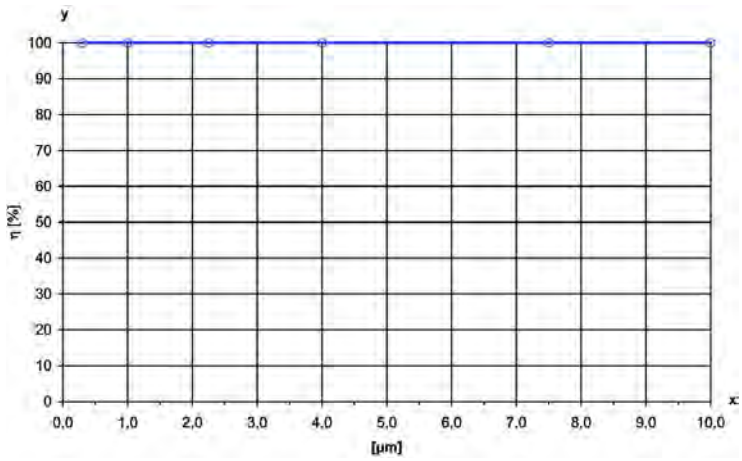
- Efficient surface filtration thanks to the microporous PTFE membrane
- High mechanical strenght
- Very good chemical resistance to acids and organic solvent vapours
- Very smooth, fibre-free surface
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M" and EN 1822-3 class "E10" at v ≤ 1m/min
- Filter media is conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1550 re-quirements
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 56/2	Polyester Fleece with PT-FE membrane	0.65	260	260 at Δp 200 Pa	130 (permanent) 150 (peaks)	DIN EN 60335-2-69 "M" EN 1822-3 class "E10"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration effciency:	> 99,99 %
	at 0.3 µm
Test conditions	
Inflow velocity:	3.36 m/min
Mass concentration:	200 mg/m³
Test dust:	Dolomit DRB 20
	(Rock flour)

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)	x		
Hydrolysis			x		Stability	x		
Acids		x			Abrasion resistance			x
Alkalis			x		Cleanability (jet pulse)	x		
Solvents		x			Washability		x	

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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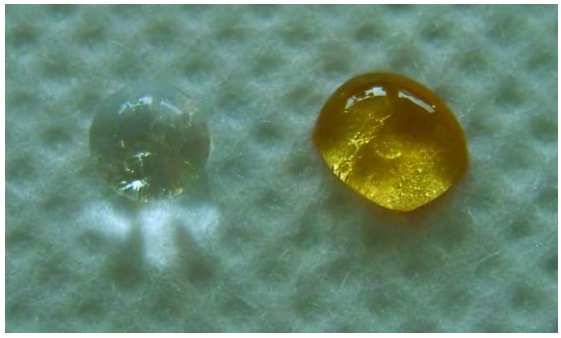
Filter media
Ti 69

Polyester fleece, oil and water-repellent

1. Features

Ti 69 is a specially optimised polyester (PET) filter media offering improved filtration efficiency in combination with high air permeability. Its excellent cleaning properties are the outcome of an oil and water-repellent finishing.
The media owes its remarkable stability to the thermoplastic solidification process. No binders are used.



Characteristics

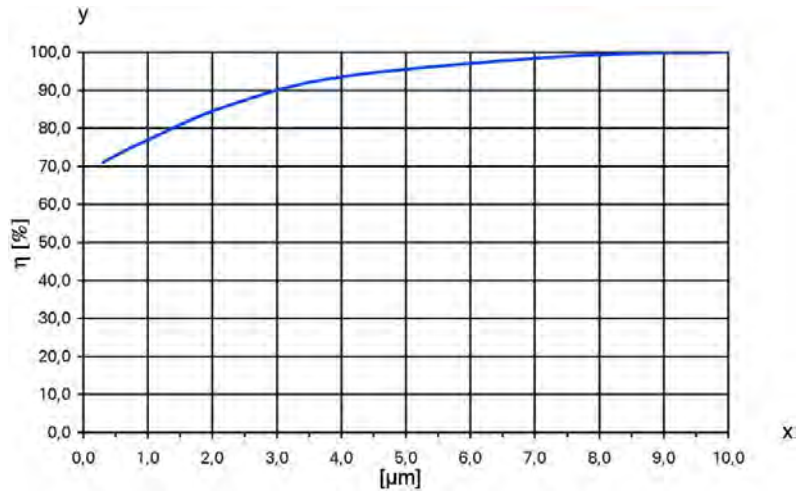
- Oil and water-repellent finishing
- High mechanical strength
- Smooth surface
- Excellent cleaning probertiesr
- Resistant to a large number of chemicals
- Thermoplastic bound, no binding agent
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "L"
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 69	Polyester fleece, oil and water-repellent	0.76	285	635 at Δp 200 Pa	130 (permanent) 150 (peaks)	DIN EN 60335-2-69 "L"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration effciency: > 98 %
at 5 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)	x		
Hydrolysis			x		Stability	x		
Acids		x			Abrasion resistance	x		
Alkalis			x		Cleanability (jet pulse)	x		
Solvents		x			Washability		x	

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

Please contact us for detailed technical information, any open questions and for general expert advice.
Completion of the relevant questionnaire would facilitate in the coordination of all the important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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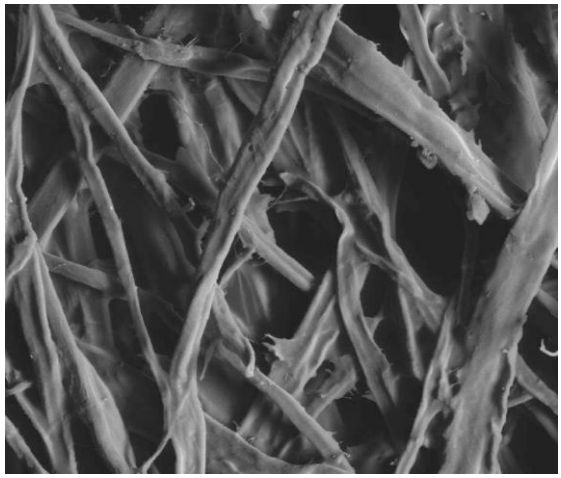
70342023.04/2019

Filter media
Ti 70

Cellulose with 30 % Polyester fibres

1. Features

The cellulose/polyester fibre blend chosen for this filter media consists of 30 % polyester and 70 % cellulose. This filter media is characterised by high stability and very good hydrophobicity.
Using the MAHLE pleat distance control "Pleat Lock" and the deep fluted cellulose media, the Ti 70 obtains high performance, economic efficiency with less differential pressure and high durability.



Charakteristics

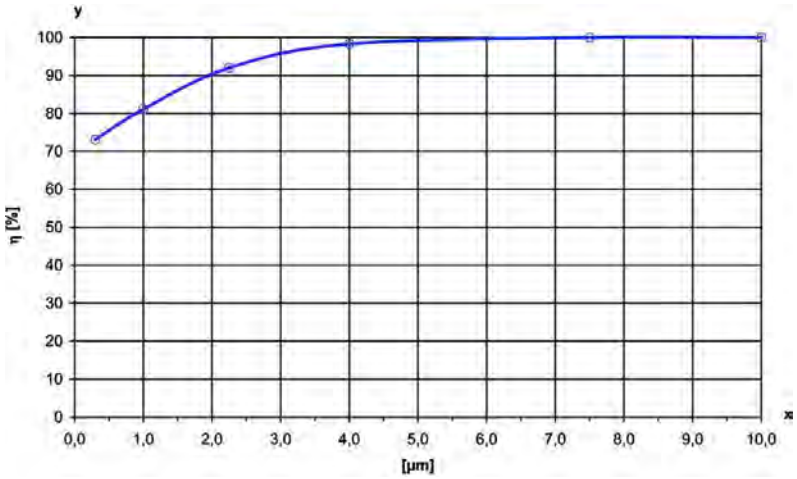
- High mechanical strength
- Better wet resistance than conventional filter papers
- Smooth and fluted surface
- Long filter life and low pressure loss
- Economical under operation conditions
- Good cleanability under operation conditions
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M"
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 70	Cellulose with 30 % poly-ester fibres	0.77 (fluted)	200	400 at Δp 200 Pa	120 (permanent)	DIN EN 60335-2-69 "M"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration effciency: > 98 %
at 4 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)		x	
Hydrolysis		x			Stability		x	
Acids			x		Abrasion resistance		x	
Alkalis		x			Cleanability (jet pulse)		x	
Solvents		x			Washability			x

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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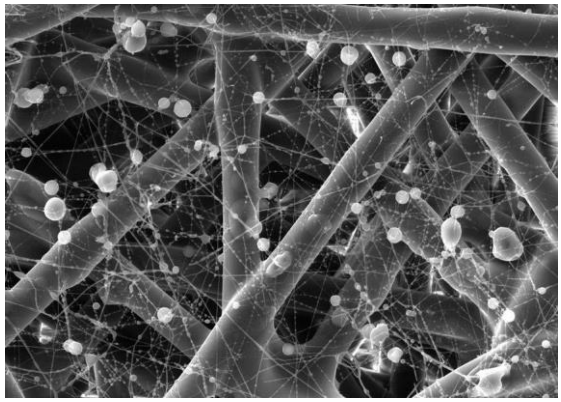
70342025.04/2019

Filter media
Ti 201

Polyester fleece with polyester nano fibres (M-Web)

1. Features

The Ti 201 filter media is ideal for use in cleanable filter plants.
It owes its excellent filtration and cleaning properties to the M-Web Polyester coating. The media combines efficient operation with a low pressure loss and high separation efficiency.
Therefore the Ti 201 filter media is especially suitable for filtration of induction air, e.g. vacuum cleaner (wet and dry suction).



Characteristics

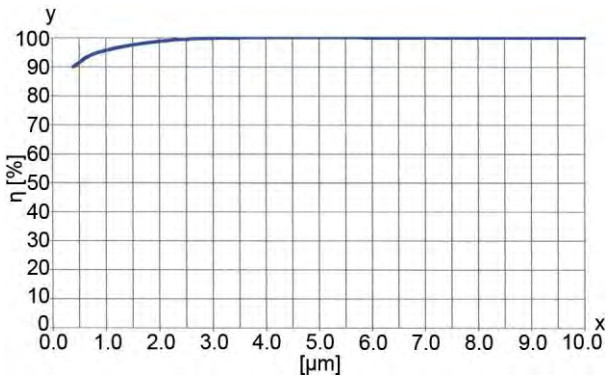
- Optimum cleaning properties
- Water-resistant
- Low pressure loss
- Long filter life
- Efficient operation
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M"
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 201	Polyester with polyester nano fibres (M-Web)	0.6	240	540 at Δp 200 Pa	130 (permanent) 150 (peaks)	DIN EN 60335-2-69 "M"

Technical data is subject to change without notice!

3. Filtration Efficiency



Filtration effciency: > 99 %
at 2.5 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)		x	
Hydrolysis			x		Stability		x	
Acids		x			Abrasion resistance			x
Alkalis			x		Cleanability (jet pulse)	x		
Solvents		x			Washability			x

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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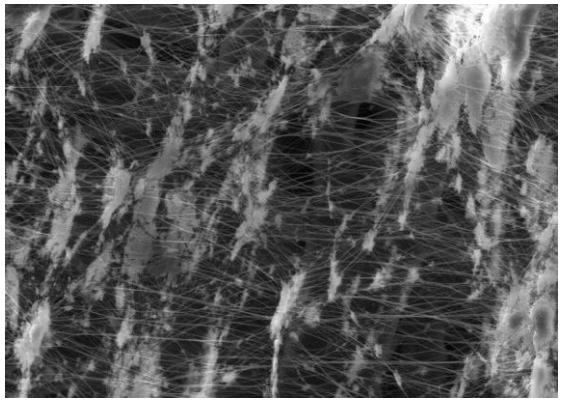
70518375.04/2019

Filter media
Ti 202

Polyester fleece with PTFE membrane

1. Features

The two-layer structure of this filter media enables the maximum benefit of the surface filtration.
The fine-pored PTFE membrane separates almost all the dust on the membrane surface. Owing to its very smooth, fibre-free surface, Ti 202 is especially suitable for cleanable dust filter cartridges. Especially challenging filtration tasks will be solved with a long service life.



Characteristics

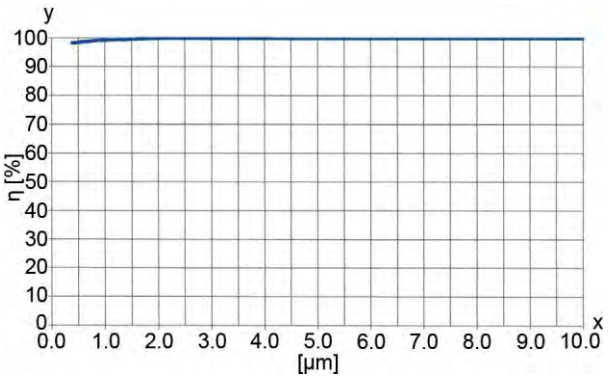
- Efficient surface filtration thanks to the microporous PTFE membrane
- High mechanical strenght
- Very good chemical resistance to acids and organic solvent vapours
- Very smooth, fibre-free surface
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M"
- Filter media is conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1550 re-quirements
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 202	Polyester fleece with PT-FE membrane	0.50	200	260 at Δp 200 Pa	120 (permanent) 140 (peaks)	DIN EN 60335-2-69 "M"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration effciency: > 99,99 %
at 0.5 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)	x		
Hydrolysis			x		Stability	x		
Acids		x			Abrasion resistance			x
Alkalis			x		Cleanability (jet pulse)	x		
Solvents		x			Washability		x	

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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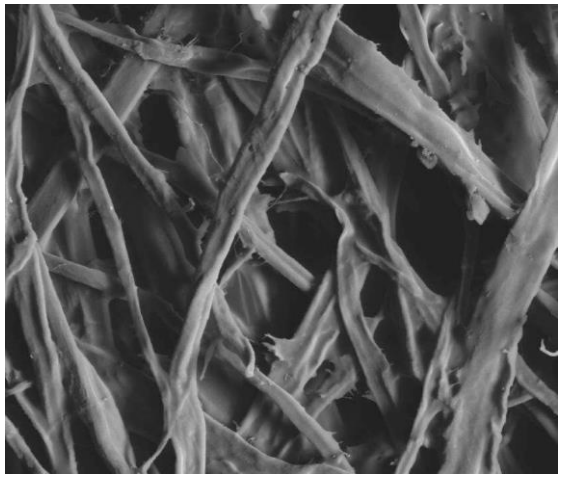
70518378.04/2019

Filter media
Ti 205

Cellulose with 20 % polyester fibres
Flame-retardant

1. Features

The cellulose/polyester fibre blend chosen for this filter media consists of 80 % cellulose and 20 % polyester. This filter media is characterised by high stability and very good hydrophobicity. The media combines efficient operation with a low pressure loss and long filter service life.
Furthermore the filter media Ti 205 is flame-retardant and therefor most suitable for flame spraying, plasma and laser cutting as well as welding applications.



Characteristics

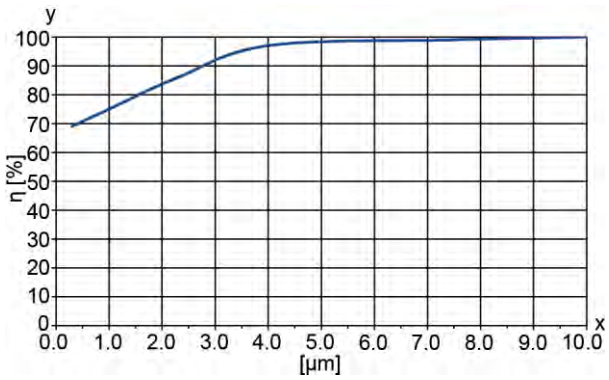
- Flame-retardant
- Water-resistant
- Smooth and fluted surface
- Optimized cleaneability
- Low pressure loss
- High stability
- Long service life
- Efficient operation
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M"
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 205	Cellulose with 20 % polyester-fibres, flame-retardant	0.6 (fluted)	135	560 at Δp 200 Pa	90 (permanent)	DIN EN 60335-2-69 "M"

Technical data is subject to change without notice!

3. Filtration efficiency



Filtration efficiency: > 98 %
at 5 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smooth-ness)		x	
Hydrolysis		x			Stability		x	
Acids			x		Abrasion resistance		x	
Alkalis		x			Cleanability (jet pulse)		x	
Solvents		x			Washability			x

These properties are of purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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70550902.04/2019

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Filtration Group

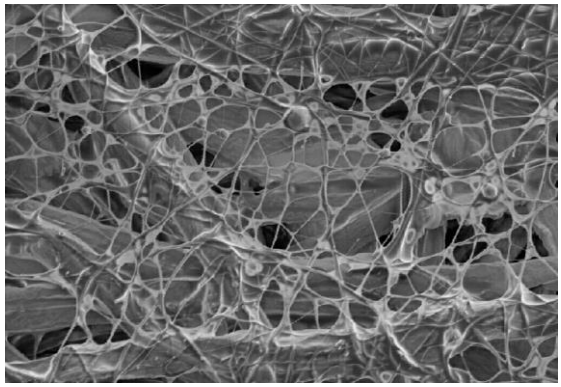
MAHLE Industrialfiltration is now Filtration Group. For more information, visit www.fluid.filtrationgroup.com

Filter media
Ti 206

Cellulose with polyester fibres (M-Web)
Flame-retardant

1. Features

The Ti 206 filter media is ideal for use in cleanable filter plants. It owes its excellent filtration and cleaning properties to the M-Web coating. The media combines efficient operation with a low pressure loss and high separation efficiency. Furthermore the filter media Ti 206 is flame-retardant and therefor most suitable for welding and laser cutting applications.



Characteristics

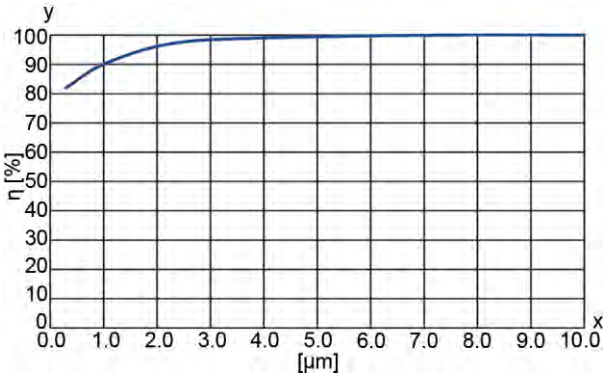
- Optimum cleaning properties due to M-Web (nano fibres) coating
- Humidity-resistant
- Smooth and fluted surface
- Flame-retardant
- High stability
- Low pressure loss
- Long filter life
- Efficient operation
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M"
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 206	Cellulose with polyester fibres M-Web)	0.4 (fluted)	140	650 at Δp 200 Pa	90 (permanent)	DIN EN 60335-2-69 "M"

Technical data is subject to change without notice!

3. Filtration Efficiency



Filtration effciency: > 99 %
at 1.5 µm

Test conditions
Inflow velocity: 3.36 m/min
Mass concentration: 200 mg/m³
Test dust: Dolomit DRB 20 (Rock flour)

x = Particle size [µm]

y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)		x	
Hydrolysis		x			Stability		x	
Acids			x		Abrasion resistance			x
Alkalis		x			Cleanability (jet pulse)	x		
Solvents		x			Washability			x

These properties are of a purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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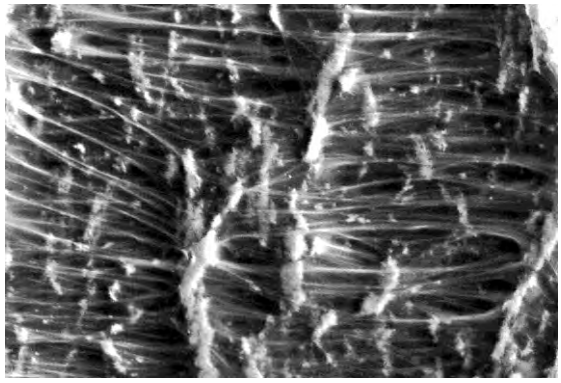
70590341.04/2019

Filter media
Ti 2011

Polyester fleece with stainless steel fibres and PTFE membrane, electrostatical conductive

1. Features

The filter media Ti 2011 is specially engineered for filtration of very fine, electrostatically charged and flammable dust. This pioneering filter media combines a polyester fleece with stainless steel fibres and with a laminated PTFE membrane and silver fibres. Compared to other electrostatical conductive filter media its surface is white. Electrostatically charged particles transfer their charge via the membrane to the conductive polyester media. Ti 2011 is a composite media that makes the advantages of surface filtration combined with a white media accessible to ATEX applications in the food and pharmaceutical industry.



Characteristics

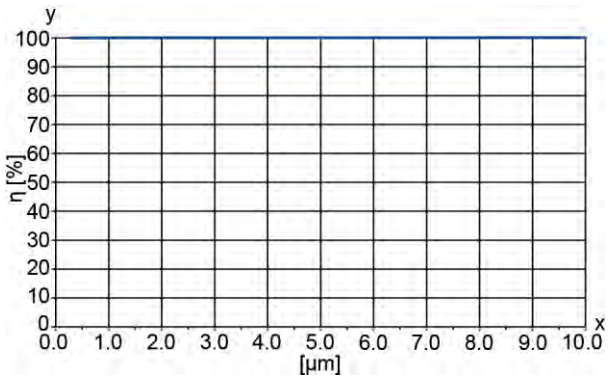
- Specially designed for filtering electrostatically chargeable and explosive fine dusts
- Efficient surface filtration thanks to the microporous PTFE membrane
- High mechanical strength
- High load capacity
- Very smooth, fibre-free surface
- Excellent cleaning properties
- Compliance with the requirements of DIN EN 60335-2-69/Dust class "M" and EN 1822-3 class "E10" at v ≤ 1m/min
- Filter media is conform to regulations (EC) No. 1935/2004 and (EU) No. 10/2011 as well as FDA 21 CFR CH. I §177.1550 requirements
- Electro statical behaviour tested according to DIN EN 54345 Part 5
- Worldwide distribution

2. Technical data

Type	Media	Media thickness [mm]	Weight [g/m²]	Air permeability [m³/m²h]	max. operating temperature [°C]	Test certificates/ dust classes
Ti 2011	Polyester fleece with stainless steel fibres and PTFE membrane	0.65	350	180 at Δp 200 Pa	130	DIN EN 60335-2-69 "M" EN 1822-3 "E10"

Technical data is subject to change without notice!
Electrostatic resistance according to DIN EN 54345 Part 1 and 5: < 1 x 10^6 Ω

3. Filtration efficiency



Filtration efficiency:	> 99.99 %
	at 0.3 µm
Test conditions	
Inflow velocity:	3.36 m/min
Mass concentration:	200 mg/m³
Test dust:	Dolomit DRB 20 (Rock flour)

x = Particle size [µm]
y = Filtration efficiency η [%]

These values may vary depending on the nature of the dust, the composition of the gas and the cartridge design.

4. Chemical resistance/mechanical properties

Chemical resistance	Very good	Good	Limited		Mechanical properties	Very good	Good	Limited
Humidity		x			Surface quality (smoothness)	x		
Hydrolysis			x		Stability	x		
Acids		x			Abrasion resistance			x
Alkalis			x		Cleanability (jet pulse)	x		
Solvents		x			Washability		x	

These properties are of purely qualitative valuation and depending on the nature of the dust, the composition of the gas and the operating conditions (e.g. temperature).

5. Design

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72402364.04/2019

Cleaning unit
MJD

for dust cartridges up to Ø 328 mm

1. Features

The Filtration Group cleaning system MJD is a very cost and cleaning efficient jet pulse cleaning system for dust filter cartridges.
By a aimed air flow with the optimized multi-jet nozzle, we can reach a regular cleaning over the whole length of the cartridge.
The cleaning system is available for the different cartridge diameter in optimized sizes. Depending on the application the cleaning system (MJD) is available in aluminium/steel zinc plated, as the standard or stainless steel, as a special version.

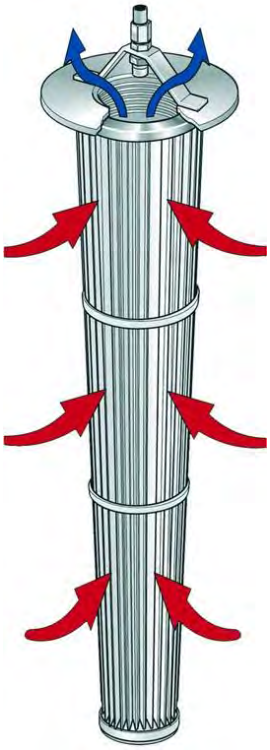
Characteristics

- Extremely effective
- Extreme energy efficiecy
- Uniform cleaning
- Optimized cleaning efficiency in the upper and bottom part of the cartridge
- Versions for both the untreated and cleaned gas sides
- Compatible to the Rotating Wing (G1 valve)
- Low noise level
- Minimal consumption of comressed air due of the optimised nozzle geometry
- Worldwide distribution

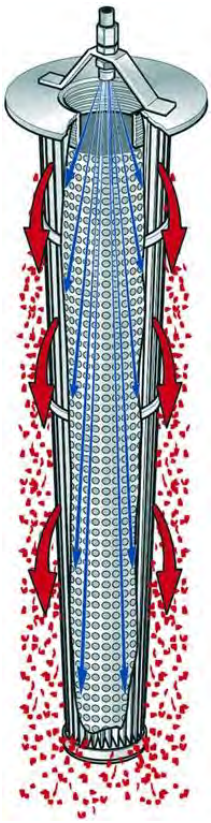
In relation with the Filtration Group cartridge the multi-jet cleaning system (MJD) is providing a very efficient and economic solution for a lot of applications.
The optimized multi-jet nozzle (MJD), comparing to the conventional nozzle or jet pipe, shows huge advantages. The advantages are given in the noise reduction (up to 8 dB), energy efficiency and cleaning efficiency.
Thereby you go easy on environment and the live time of the cartridges will increase considerable.

2. Function

During the filtration phase dust particles are separated on the cartridge surface. A filter cake forms, which will be cleaned at a time control or differential pressure related.
At the cleaning we get a very quick expansion of the pressure vessel volume in a short time. These will reverse the flow direction and blow off the filter cake.



Filtration phase



Cleaning phase

3. Technical data

Cleaning unit for dust cartridges with an outside diameter up to 328 mm.

Standard version multi-jet nozzle

Material: Aluminium

Special version multi-jet nozzle

Material: stainless steel (1.4301)

Standard and special version

Differential pressure via filter plate: max. 15 mbar*

Cleaning medium: Oil, dust and condensate-free compressed air at operating temperature

Compressed air connection: G3/8 , G3/4, G1 male*

Compressed air: 5 bar to 6 bar (max. 7 bar)

Pulse duration: 0.1 s to 0.3 s

Compressed air consumption per cartridge		
Type designation	**Capacity of pressure vessel [l]**	**Compressed air consumption per cleaning impuls [l] (fad)**
MJD-12	2	9
MJD-16	6	27
MJD-32	16 - 32	68 - 92

* Depends on cartridge geometry

Technical data is subject to change without notice!

Multi-jet nozzle during cleaning

4. Ordering example

4.1 Type number key for cleaning units

Type of cleaning

- **MJD** Multi-jet nozzle for conical and cylindrical cartridges
- **RLD** Rotating wing for cylindrical cartridges
- **RLK** Rotating wing for conical cartridges

Cartridge diameter

- **-12** 120 mm
- **-16** 160 mm
- **-32** 328 mm

Cartridge length and mode of installation

- **00** Independent of lenght, installation for example via round thread or bayonet
- **03** 300 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **06** 600 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **10** 1000 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **12** 1200 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock

Installation side of cartridge

- **REIN** Installation on cleaned gas side
- **ROH** Installation on untreated gas side

Versions

- **A1** Nozzle aluminium or galvanized or coated steel, RLD/K with ball bearing
- **V1** Nozzle aluminium or stainless steel, RLD with plain bearing
- **V2** Stainless steel, RLD with plain bearing
- **OS** Only RLD/K with ball bearing without baffle plate, Nozzle aluminium or coated steel

MJD	**-16**	**00**	**REIN**	**A1**	**Ordering example**

4.2 Order numbers

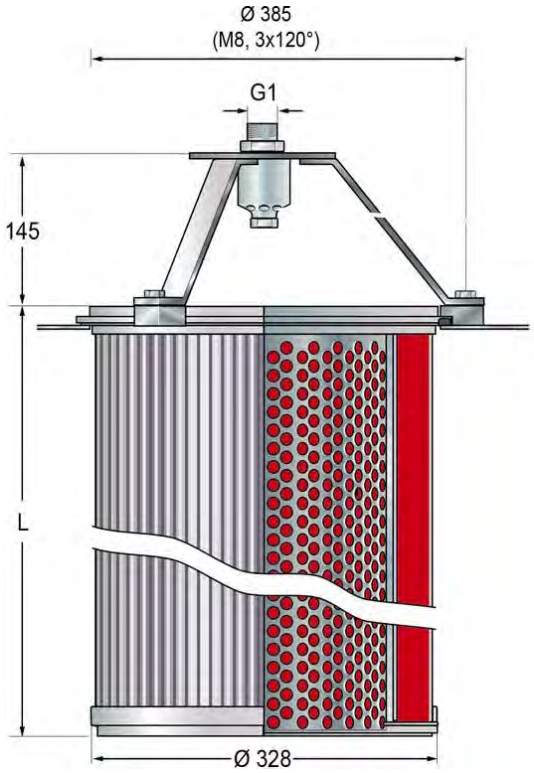
Order number	Cleaning unit	Cartridge geometry	Cartridge mounting
79741232	MJD-12 00 ROH A1 VP	up to Ø 120 mm	Untreated gas side
76925655	MJD-12 00 REIN A1 VP		Cleaned gas side
70375835	MJD-12 00 ROH V2 VP		Untreated gas side
70343901	MJD-16 00 ROH A1 VP	up to Ø 220 mm	
70343906	MJD-16 00 ROH V2 VP		
79741240	MJD-16 00 REIN A1 VP		Cleaned gas side
79356379	MJD-32 03 ROH A1 VP	Ø 328 mm	Untreated gas side
79356387	MJD-32 06 ROH A1 VP		
79356395	MJD-32 10 ROH A1 VP		
70304809	MJD-32 00 ROH A1 VP	Quick-Lock Ø 328 mm	

5. Accessories

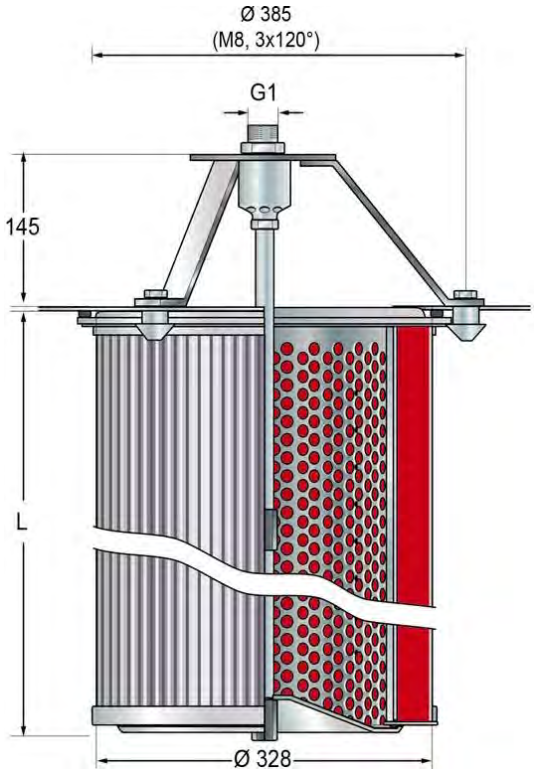
Order numbers	Designation
79791104	Holding bolts PA6, pack of 3
77838568	Centre ring EL 033, galvanized steel
77934326	Centre ring EL 033, V2A stainless steel
77885031	Centre ring 2E 033, galvanized steel
78215220	Centre ring 2E 033, V2A stainless steel
76161913	Reusable end cap, galvanized steel
76161921	Reusable end cap, V4A stainless steel

6. Installation

The multi-jet nozzle can be supplied for installation on the untreated or cleaned gas side.
A membrane valve must be provided on the pressure vessel for each cleaning unit. The cartridges are individually cleaned to ensure the least possible impairment to the volume flow and optimal cleaning results. The membrane valves can be controlled according to a time control or a differential pressure limit.



Installation on the cleaned gas side



Installation on the untreated gas side

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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FG Fluid Solutions
Filtration Group

MAHLE Industrialfiltration is now Filtration Group. For more information, visit www.fluid.filtrationgroup.com

Cleaning systems
MJD, RLD, RLK

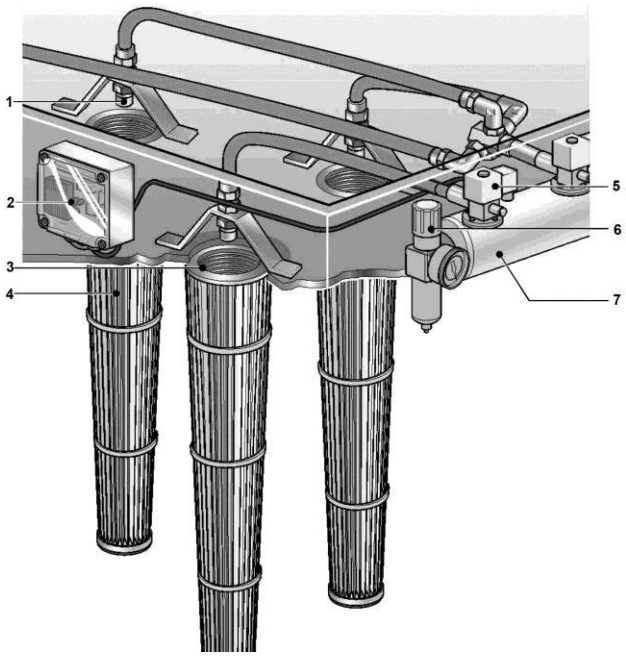
1. Features

With Filtration Group cleaning systems we developed a product, characterized by highly efficient cleaning. Additionally the system stands out due to remarkably low operating costs and a minimum amount of maintenance.
The compact systems are suited for the installation in various dust collectors. Specially developed conical filter cartridges grant an excellent air flow within the filter section. This enables long durability of the cartridges. In addition, an efficient and moderate cleaning contributes to an extended lifetime of the cartridges. The differential pressure control allows ideal cleaning properties and guarantees an operation of the system without any breakdowns.
Regular, extensive material and performance tests are the key to the consistently high quality of Filtration Group dust cartridges. A team of dedicated engineers in our applications department and modern development laboratories constantly endeavor to mature and perfect our products. Applications tests both on the customer's side and in our own facilities form the backbone of affordable and reliable products.

Characteristics

- High effectiveness and energy efficiency
- Economic solution through conical filter cartridges
- Gentle and improved cleaning for long filter durability and low operating costs
- Easy to maintain
- Compact and complete system
- Reduced noise level
- Optimized flow conditions

2. Types



1 **Abreinigungseinheit**
Multijetdüse MJD bzw. Rotationslüftdüse RLD oder RLK

2 **Control**
Time controlled cleaning MFS-05
Differential pressure controlled cleaning MFS-05 dp

3 **Installation**
Clean and dirt air side mounting with different fixing devices

4 **Filter cartridges**
Conical cartridges in different dimensions

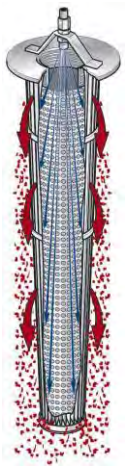
5 **Magnetic valve**

6 **Maintenance unit**
Pressure reducer with gauge

7 **Pressure vessel**
Volume from 2 l to 32 l

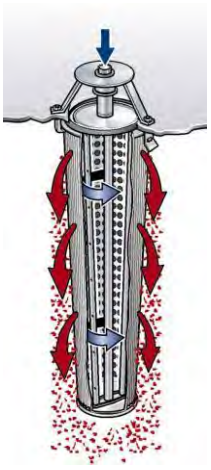
3. Cleaning

Multi-jet nozzle



The optimized multi-jet nozzle grants a highly efficient cleaning with little air consumption..

Rotating wing



With the rotation wing a gentle cleaning is possible, which extends the life of the filter cartridges remarkably.

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05/2019

Cleaning unit
RLD

for cylindrical dust cartridges, Ø 328 mm

1. Features

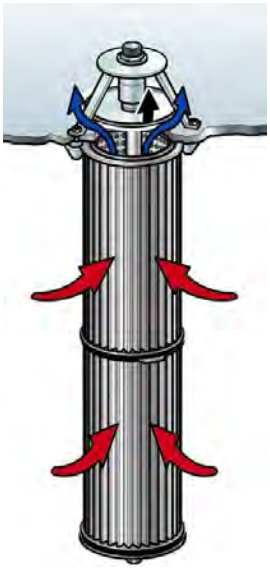
The Filtration Group rotating wing is an extremely efficient cleaning system for dust collectors that enables the dust filter cake to be detached over the complete cartridge length.
Depending on the application, the Filtration Group rotating wing can be supplied either in a standard steel version with a ball bearing or in a special stainless steel/aluminium version with plain bearing..
In combination with Filtration Group dust cartridges, the rotating wing represents an exceptionally effective and economical solution that is suitable for a wide range of applications.

Characteristics

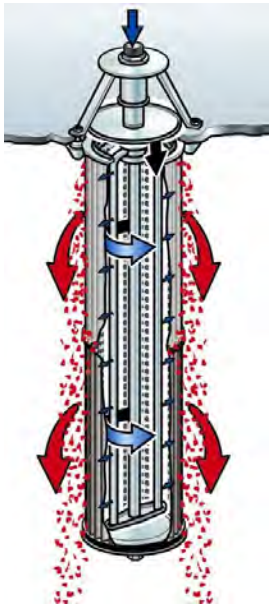
- Extremely efficient
- Uniform cleaning
- Versions for both the untreated and cleaned gas sides
- Low noise level
- Minimal consumption of comressed air
- Careful cleaning of cartridges
- Low cleaning pressure
- Suitable for high differential pressure load
- Worldwide distribution

2. Function

During the filtration phase, the baffle plate is forced upwards by the flow. Dust particles are separated on the cartridge surface and a filter cake forms.
The cleaning pulse forces the baffle plate downwards and moves the cartridge out of the filtered fluid flow. At the same time, the rotating wing element is set in motion by the nozzle holes and the filter cake is detached by the fine pulsed air jets and the simultaneous vibratory movement in the cartridge pleats.



Filtration phase



Cleaning phase

3. Technical data

Cleaning unit for dust cartridges with an outside diameter of 328 mm and an inside diameter of 216 mm.

Standard version with ball bearing

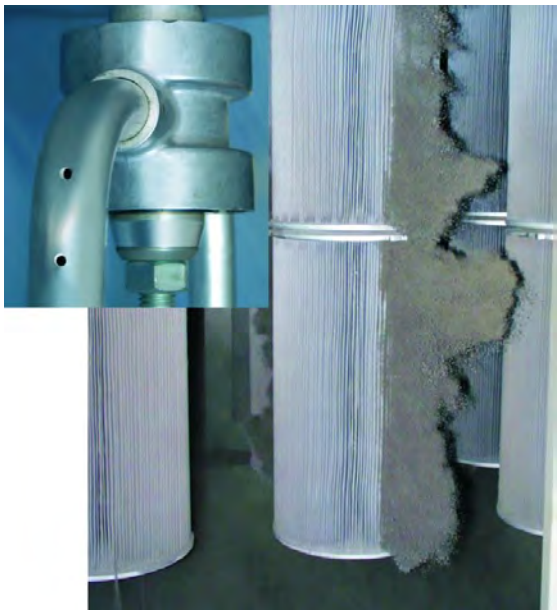
Materials: Aluminium, galvanized steel, polyester
Operating temperature: -20 °C to 100 °C

Special version with plain bearing

Materials: Aluminium, stainless steel (1.4301), PTFE (plain bearing bush), silicone, Silikon
Operating temperature: -40 °C to 200 °C

Standard and special versions

Differential pressure via filter plate: up to max. 30 mbar*
Cleaning medium: Oil, dust and condensate-free compressed air at operating temperature
Compressed air connection: G¾ male
Compressed air: 3 bar to 4 bar (max. 4.2 bar)
Pulse duration: 0.5 s to 3 s (standard 1.5 s)



Rotating wing during cleaning

Compressed air consumption		
Type designation	**Capacity of pressure vessel [l]**	**Compressed air consumption per cleaning impuls [l] (fad)**
RLD-32 03	10	Approx. 30
RLD-32 06	16	Approx. 50
RLD-32 10	32	Approx. 80
RLD-32 12	32	Approx. 90

* Depends on cartridge geometry
Technical data is subject to change without notice!

4. Ordering example

4.1 Type number key for cleaning units

Type of cleaning

- **MJD** Multi-jet nozzle for conical and cylindrical cartridges
- **RLD** Rotating wing for cylindrical cartridges
- **RLK** Rotating wing for conical cartridges

Cartridge diameter

- **-12** 120 mm
- **-16** 160 mm
- **-32** 328 mm

Cartridge length and mode of installation

- **00** Independent of lenght, installation for example via round thread or bayonet
- **03** 300 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **06** 600 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **10** 1000 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **12** 1200 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock

Installation side of cartridge

- **REIN** Installation on cleaned gas side
- **ROH** Installation on untreated gas side

Versions

- **A1** Nozzle aluminium or galvanized or coated steel, RLD/K with ball bearing
- **V1** Nozzle aluminium or stainless steel, RLD with plain bearing
- **V2** Stainless steel, RLD with plain bearing
- **OS** Only RLD/K with ball bearing without baffle plate, Nozzle aluminium or coated steel

RLD	**-32**	**12**	**ROH**	**A1**	**Ordering example**

4.2 Order numbers

Order number*	Cleaning unit	Cartridge model designation**	Dimension L [mm]	Cartridge mounting	Comments
78296741	RLD-32 03 REIN A1	852 829 Ti...	300	Cleaned gas side	Cartridge with closed end cap
78296758	RLD-32 06 REIN A1	852 781Ti...	600		
79340480	RLD-32 10 REIN A1	852 943 Ti...	984		
78331878	RLD-32 03 ROH A1	852 826 Ti...	300	Untreated gas side	
78331852	RLD-32 06 ROH A1	852 908 Ti...	600	Untreated gas side	Cartridge with reusable end cap
78390106	RLD-32 10 ROH A1	852 909 Ti...	984		
78331696	RLD-32 12 ROH A1	852 908 Ti...	1208		

* Ball bearing version, order numbers for plain bearing version on request.

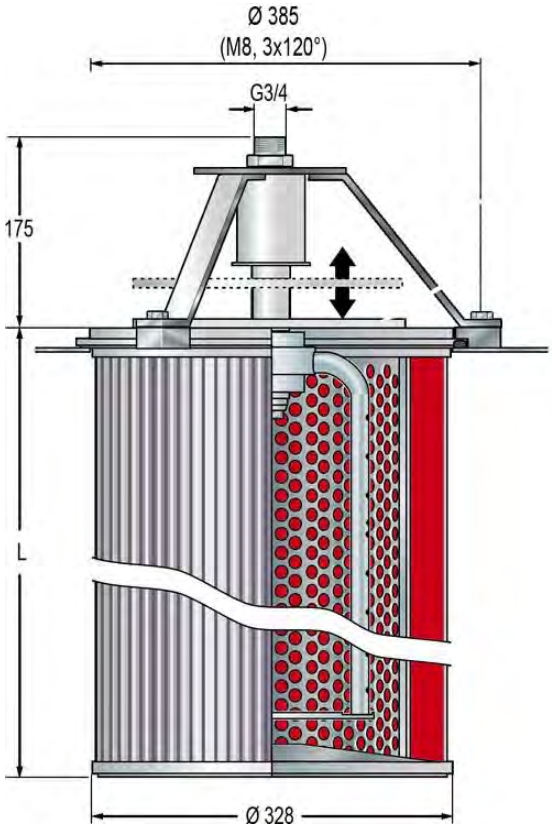
** For more information, refer to the data sheets for the 328 NZ and 328 NZC dust cartridges.

5. Accessories

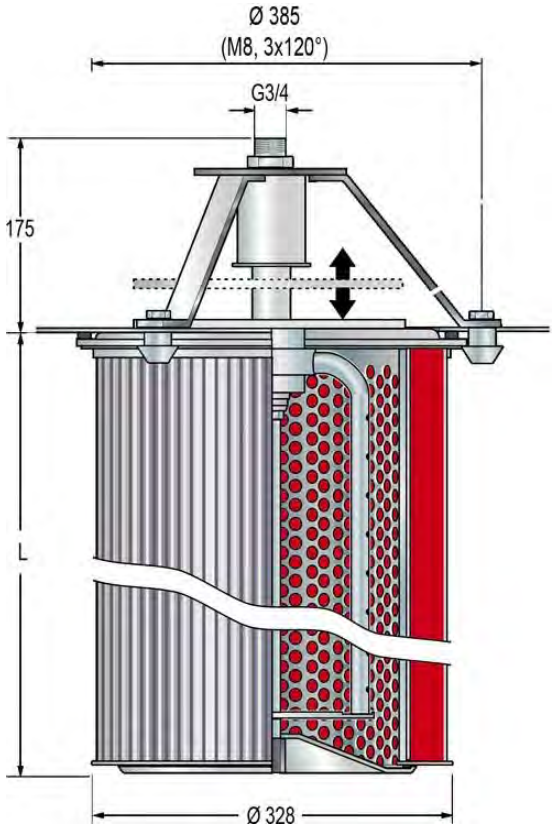
Order number	Designation
79791104	Holding bolts PA6, pack of 3
77838568	Centre ring EL 033, galvanized steel
77934326	Centre ring EL 033, V2A stainless steel
77885031	Centre ring 2E 033, galvanized steel
78215220	Centre ring 2E 033, V2A stainless steel
76161913	Reusable end cap, galvanized steel
76161921	Reusable end cap, V4A stainless steel

6. Installation

Rotating wing versions can be supplied for installation on the untreated or cleaned gas side.
A membrane valve must be provided on the pressure vessel for each cleaning unit. The cartridges are individually cleaned to ensure the least possible impairment to the volume flow and optimal cleaning results. The membrane valves can be controlled according to a preset time or a differential pressure limit.



Installation on the cleaned gas side
A hole with a diameter of 330 mm must be drilled in the filter plate.



Installation on the untreated gas side
A hole with a diameter of 210 mm must be drilled in the filter plate.

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.

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70350869.05/2019

Cleaning unit
RLK

for conical dust cartridges, Ø 328 mm

1. Features

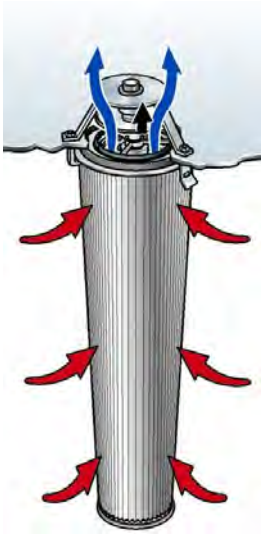
The conical Filtration Group rotating wing is an extremely efficient cleaning system for dust collectors that enables the dust filter cake to be detached over the complete cartridge length. This will increase the lifetime of the filter cartridge. Based on the optimized air flow the cleaning has a very low noise level. Comparing to the multi-jet cleaning we can reduce the pressure in the pressure vessel, which gives an efficient energy operating.
In combination with Filtration Group Quick-Lock dust cartridges, the rotating wing represents an exceptionally effective and economical solution which is suitable for a wide range of applications.

Characteristics

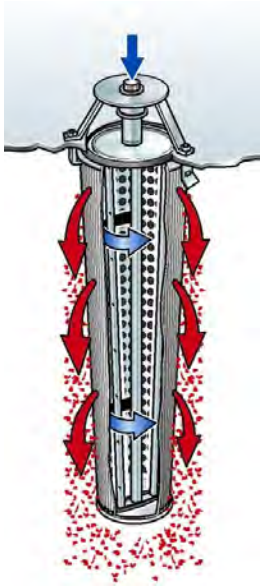
- Extremely efficient
- Uniform cleaning
- Version for the untreated gas side
- Simple installation
- Low mounting height
- Low noise level
- Minimal consumption of comressed air
- Careful cleaning of cartridges
- Low cleaning pressure
- Suitable for high differential pressure load
- Worldwide distribution

2. Function

During the filtration phase, the baffle plate is forced upwards by the flow. Dust particles are separated on the cartridge surface and a filter cake forms.
The cleaning pulse forces the baffle plate downwards and moves the cartridge out of the filtered fluid flow. At the same time, the rotating wing element is set in motion by the nozzle holes and the filter cake is detached by the fine pulsed air jets and the simultaneous vibratory movement in the cartridge pleats.



Filtration phase



Cleaning phase

3. Technical data

Cleaning unit for Quick-Lock dust cartridges with an outside diameter of 328 mm.

Materials:	Aluminium, galvanized steel, polypropylene
Operating temperature:	-20 °C to 50 °C
Differential pressure via filter plate:	max. 30 mbar
Cleaning medium:	Oil, dust and condensate-free compressed air at operating temperature
Compressed air connection:	G¾ male
Compressed air:	3 bar to 4 bar (max. 4.2 bar)
Pulse duration:	0.5 s to 3 s (standard 1.5 s)

Compressed air consumption		
Type designation	**Capacity of pressure vessel [l]**	**Compressed air consumption per cleaning impuls [l] (fad)**
RLK-3206 ROH	16	Approx. 50
RLK-3210 ROH	32	Approx. 80
RLK-3212 ROH	32	Approx. 90

Technical data is subject to change without notice!

Rotating wing during cleaning

4. Type number key and Order numbers

4.1 Type number key for cleaning units

Type of cleaning

- **MJD** Multi-jet nozzle for conical and cylindrical cartridges
- **RLD** Rotating wing for cylindrical cartridges
- **RLK** Rotating wing for conical cartridges

Cartridge diameter

- **-12** 120 mm
- **-16** 160 mm
- **-32** 328 mm

Cartridge length and mode of installation

- **00** Independent of lenght, installation for example via round thread or bayonet
- **03** 300 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **06** 600 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **10** 1000 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock
- **12** 1200 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock

Installation side of cartridge

- **REIN** Installation on cleaned gas side
- **ROH** Installation on untreated gas side

Versions

- **A1** Nozzle aluminium or galvanized or coated steel, RLD/K with ball bearing
- **V1** Nozzle aluminium or stainless steel, RLD with plain bearing
- **V2** Stainless steel, RLD with plain bearing
- **OS** Only RLD/K with ball bearing without baffle plate, Nozzle aluminium or coated steel

RLK	**-32**	**12**	**ROH**	**A1**	**Ordering example**

4.2 Order numbers

Order number	Cleaning unit	Cartridge model designation*	Dimension L [mm]	Cartridge mounting
70363715	RLK-32 06 ROH A1	852 052 Ti ...	600	Untreated gas side
70368951	RLK-32 10 ROH A1	852 062 Ti ...	1000	
70327511	RLK-32 12 ROH A1	852 032 Ti ...	1200	

* For more information, refer to the data sheets for the 328 NK Quick-Lock.

5. Accessories

Order number	Designation
76956668	Fixing kit Quick-Lock (1 cartridge holder, 2 fixing clips, screws)
76956676	Fixing kit Quick-Lock, pack of 10

6. Installation

The conical rotating wing can be installed and removed with the cartridge on the untreated gas side with spring clips (Quick-Lock system - no tools required). The filter plate is to prepare according Fig. 1. Afterwards the tripod with the baffle plate and the fixing kit is to mount on the filterplate. Insert the rotating wing into the cartridge (Fig. 2) and fix the centre ring (Fig. 3). Put the cartridge into the cartridge holder (Fig. 4) and snap it into the fixing clips (Fig. 5).

*1 = Cartridge holder
*2 = Fixing clip

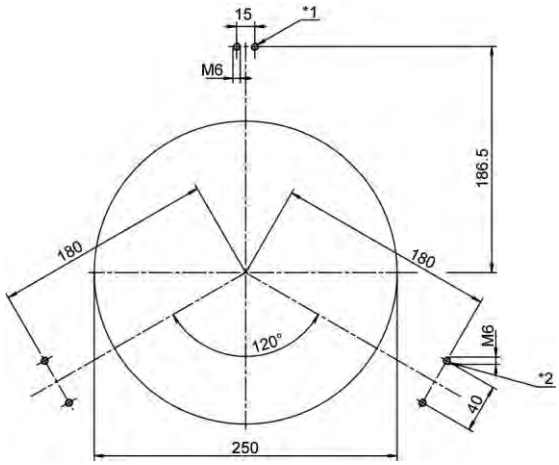


Fig. 1

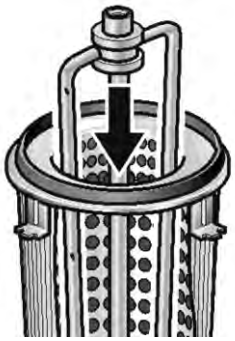


Fig. 2

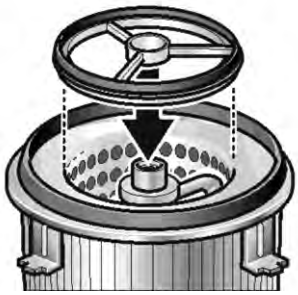


Fig. 3

Fig. 4

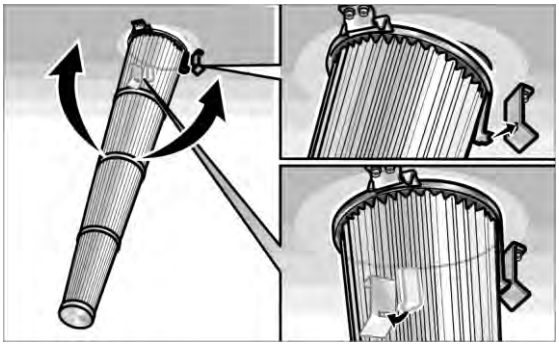


Fig. 5

7. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
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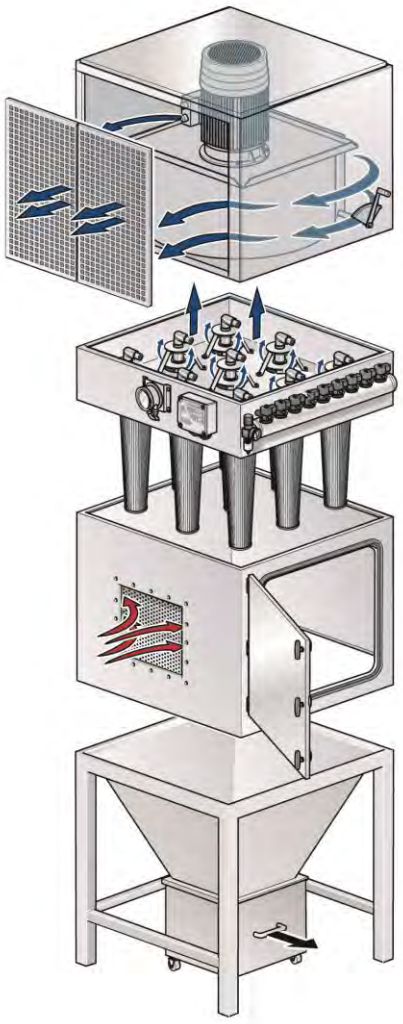
70360304.05/2019

Dust Collectors
Model code

1. Features

Filtration Group dust collectors are characterized through the features, compact design, minimum energy consumption, long service life of the cartridges and a low nice level. The dust collector must not take a large space, especially at indoor assembly. Due to the use of star pleated cartridges we can fit a large filter area in a small room. For to increase the flow behaviour and with it the capability, Filtration Group has also designed the conical cartridge.



2. Model code

Model code dust collectors with selection examples

Collector 1. + 2. item		Collector 3. item		Cartridge type/ mounting position		Number of cartridges		Dimensions		Design 1. + 2. item type		Design 3. item additional options		Housing material		Fans		Variations 1. item		Variations 2. item		Cartridge
SF	collector with air pressure cleaning	K	with conical cartridges	XX	details see model code for cartridge types and mounting position	XXX	number of mounted cartridges	XXXxXX	rectangular collector (length x width in dm)	S1	collector with bin	.	without options	V2	stainless steel V2A (AISI 304)	S1	steel sheet RAL 7035	XX	Standardventilatoren standard fans (see fan list, no. 00-99)	S	standard design	D	pressure resistant housing (p < -0.4 bar, p > 1 bar)	*EXXXXXXXX cartridge 1. filter stage
AF	not cleanable collector	R	with rotating wing					DN-XXX	circular collector (nominal diameter in cm)	S2	collector with bag	V	fan	V4	stainless steel V4A (AISI 316)	S2	steel sheet RAL 7032	..	without fan	K	customer design according to drawing	B	with pressure relief (pressure burst resistant)	
RF	collector with vibration motor	.	with cylindrical cartridges							S3	collector with bag	S	fan with silencer	VS	stainless steel special	S3	steel sheet RAL 9006	SO	special	X	special design according to drawing (no. 0-9)	T	pressure burst resistant housing	
NF	collector with air pressure cleaning + secure filter stage	I	industrial vacuum cleaner							S5	bag emptying device	W	with cap	AL	aluminum	SL	steel sheet special color			Variations 2. item		A	basic design according ATEX RL 94/9/EC	
		C	with CFE cartridges							S6	product filter with cone			SO	special	SZ	steel sheet zinc plated			D	pressure resistant housing (p < -0.4 bar, p > 1 bar)	E	with earthing/elektrostatic discharging	
										S7	product filter with wide cone									B	with pressure relief (pressure burst resistant)	Z	with cleaning controller	
										S.	filter with bottom									T	pressure burst resistant housing	.	without cleaning controller/without variation type designation	
										A.	flanged body type filter									A	basic design according ATEX RL 94/9/EC			
										E.	in take filter									E	with earthing/elektrostatic discharging			
																				Z	with cleaning controller			
																				.	without cleaning controller/without variation type designation			
SFK	-02	015	DN-071	S1V	S1	41	S	Z	*E78345811 (example circular collector)															
SFR	-08	018	016x16	S3S	S1	76	K	E	*E79355447 (example rectangular collector)															

reserved for FG designation | **from here available for customer design**

3. Model code for cartridges and mounting position

Cartridge type and mounting position							
Code	**Cartridge type**	**Cartridge diameter**	**Cartridge length**	**Alternate**	**Mounting position**	**Mounting**	**Comment**
xx	designation unknown - product in project stage						
00	other cartridge types				vertical	dirt section	
01	852 902	120	300	852 838	vertical	dirt section	RD72x5
02	852 903		600				
03	852 904		1000				
04	852 907	328	300		vertical	dirt section	Zuganker, RLD
05	852 908		600	852 782, 852 844			
06	852 909		1000				
07	852 030	328	1000	852 958	vertical	dirt section	bayonet
08	2x 852 908	328	1200	852 758, 852 782	vertical	dirt section	tie rod, RLD
09	852 032	328					Quick-Lock
10	852 073	160	600		vertical	dirt section	RD100x4
11	852 054		1000				
12	852 052	328	600		vertical	dirt section	Quick-Lock
13	852 062		1000				
20	other cartridge types				vertical	clean section	
21	852 829	328	300		vertical	clean section	
22	852 781		600				
23	852 943		983				
24					vertical	clean section	
25	852 903	120	600		vertical	clean section	with adapter
26	852 904		982				
27	852 931	160	1000	852 953	vertical	clean section	
30						dirt section	with adapter
50	other cartridge types				horizontal	dirt section	
51	852 902	120	300	852 838			RD72x5
52	852 903		600		horizontal	dirt section	
53	852 904		1000				
54	852 073	160	600		horizontal	dirt section	RD100x4
55	852 054		1000				
61	852 907	328	300		horizontal	dirt section	tie rod
62	852 908		600				
63	852 909		1000				
64							
65	2x 852 908	328	1200		horizontal	dirt section	tripot
70	other cartridge types				horizontal	clean section	
80	PAF35 9.18		1500		vertical	dirt section	Dürr-Module
81	PAF35 69.18		1500				
99	other variations						

4. Additional to the model code for dust collectors

Variations 1. item "X"

Nr. 1
with intermediate flanged filter plate
with intermediate flanged fan plate
fan silencer has the same area as the collector
exceptional at collectors with 4 cartridges, here the silencer is bigger
inlet connection is concentrical in the height
size of inlet connection adjustable with flat adapter plate
big metal sheet panels partly with welded reinforcements

Nr. 2
pressure resistant up to -56 mbar
with intermediate flanged filter plate
with intermediate flanged fan plate
fan silencer has the same area as the collector
exceptional at collectors with 4 cartridges, here the silencer is bigger
inlet connection is concentrical in the height
size of inlet connection adjustable with flat adapter plate
big metal sheet panels partly with welded reinforcements

Nr. 3
pressure resistant up to -50 mbar
with intermediate flanged filter plate
with intermediate flanged fan plate
fan silencer has always the same area
fan plate has the same area as the collector
inlet connection is concentrical in the height
round inlet connection according to DIN 24154 part 2
2 maintenance doors at clean air section
rack without reinforcement
exceptional case units with 4 elements, 1 maintenance door, enlarged fan plate

Nr. 4
pressure resistant up to -58 mbar
with intermediate flanged filter plate
with intermediate flanged fan plate
fan silencer has always the same area
fan plate has the same area as the collector
inlet connection is concentrical in the height
round inlet connection according to DIN 24154 part 2
2 maintenance doors at clean air section
rack without reinforcement
exceptional case units with 4 elements, 1 maintenance door, enlarged fan plate

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FG Fluid Solutions
Filtration Group

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Dust collector
SFK-01/02/03 SP

Circular construction

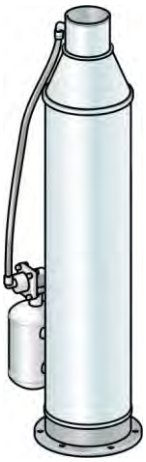
1. Features

This unit is from solidly build stainless steel. The individual housing parts are fastened together by clamp rings and can be freely rotated in relation to one another or easily dismounted if required.

Characteristics

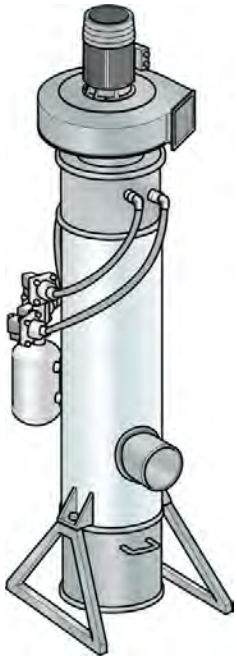
- Efficient, energy-saving cleaning with jet pulse
- Compact, space-saving design
- Volume flow range 30 to 680 m³/h
- Filter surfaces 0.5 to 6.4 m²
- Stainless steel design
- Jacob connection system
- Worldwide distribution

2. Versions



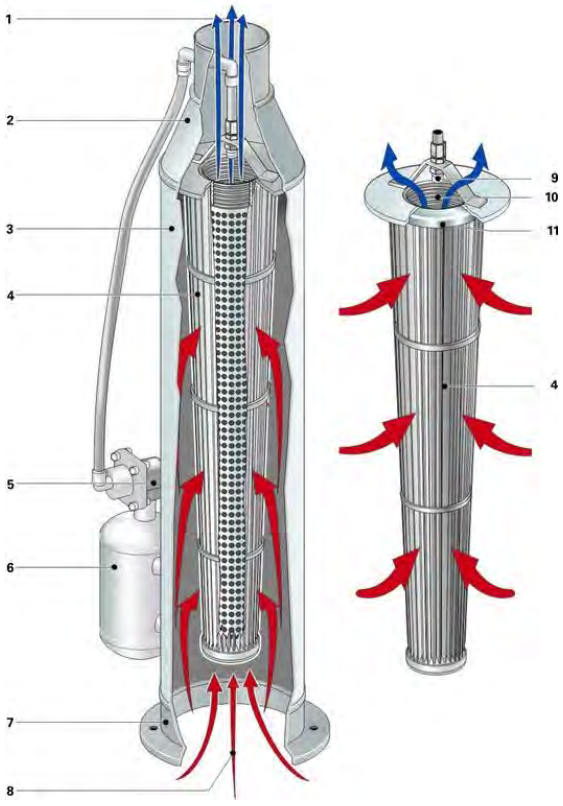
Ø 200 mm with 1 cartridge

Ø 300 - 400 mm with 3 - 4 cartridges



... plus fan, frame and dust bucket

3. Modules and accessories



1 Outlet pipe-end
2 Clean air section
3 Dirt air section
4 Cartridge
5 Membrane valve
6 Pressure vessel
7 Jacob connection system
8 Dirt air inlet
9 Cleaning nozzle
10 Threaded connection
11 Sealing ring

4. Functional description

The dust-laden air flows into the filter housing (3) at the bottom (8). As it flows through the catridge (4), fine dust is separated on the cartridge surface. The filter cake is cleaned off at fixed intervals, depending on the dust load and the filter surface load. The membrane valve (5) is controlled on customer side. The detached dust drops down. The cleaned air flows into the clean side (2) and is discharged at the top of the filter via the outlet pipe-end (1).
The jet pulse cleaning system comprises a pressure vessel with membrane valves (5) and a cleaning unit (9). The version shown here is designed for intermittent operation. For continuous filtration the variant with several elements and membrane valves should be preferred.

5. Technical Data

Dust collector

Housing material:	Stainless steel V2A - AISI 304
Max. operating pressure:	± 50 mbar
Max. operating temperature:	70 °C
Dust bucket capacity*:	6/14/25 l

Cartridges

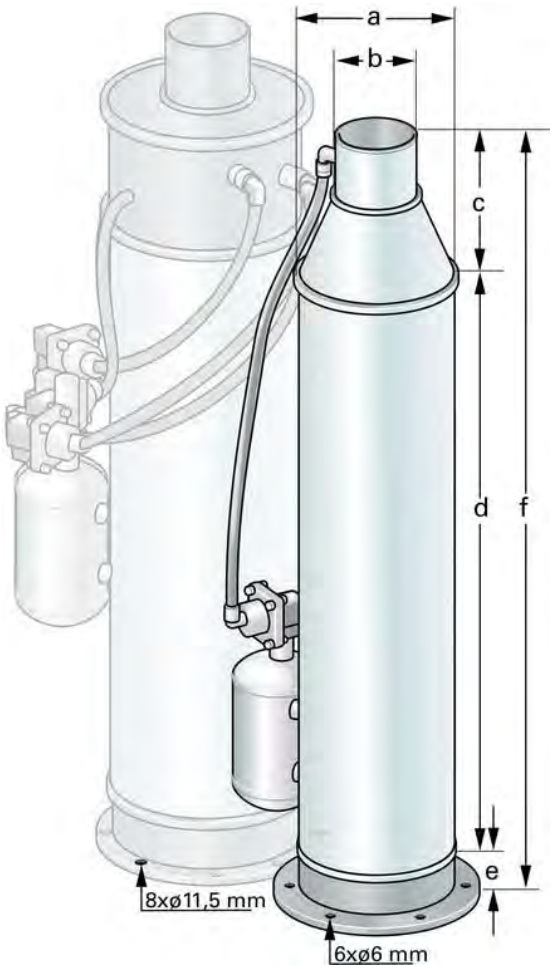
SFK-01:	Type 852 902 Ti ...** (data sheet 120 NK)
SFK-02:	Type 852 903 Ti ...** (data sheet 120 NK)
SFK-03:	Type 852 904 Ti ...** (data sheet 120 NK)

Cleaning

Cleaning system:	Filtration Group multi-jet nozzle
Medium:	Oil, dust and condensate-free compressed air at operating temperature
Compressed air connection:	G½ female
Max. air pressure:	6 bar
Compressed air consumption*:	approx. 10 l (fad) for 1 cartridge approx. 17 l (fad) for 3 or 4 cartridges per cleaning cycle
Pulse duration:	0.2 s
Controller:	Optional
Valves:	DC 24 V, 0.5 A, 12 W, IP 65

* According to version

** Filter media depending on application



6. Dimensions

Dust collector						Dimensions [mm]					
Type designation	Volume flow* [m³/h]	No. of cartridges	No. of Valves	Cartridge length [mm]	Weight [kg]	a	b	c	d	e	f
SFK-01 001 DN-020 ...	30 - 80	1	1	300	10	200	120	220	300	40	560
SFK-02 001 DN-020 ...	50 - 120			600	12				600		860
SFK-03 001 DN-020 ...	70 - 170			1000	16				984		1230
SFK-02 003 DN-030 ...	150 - 360	3	1**	600	19	300	150	300	600	50	950
SFK-02 003 DN-030 ...			3***								
SFK-03 003 DN-030 ...	210 - 510		1**	1000	24				984		1335
SFK-03 003 DN-030 ...			3***								
SFK-02 004 DN-040 ...	200 - 480	4	2***	600	32	400	300		600		950
SFK-02 004 DN-040 ...			4***								
SFK-03 004 DN-040 ...	280 - 680		2***	1000	40				984		1335
SFK-03 004 DN-040 ...			4***								

* These values may vary depending on the nature of the dust, the composition of the air and the filter media.

** Intermittent filtration

*** Continious filtration

Technical data is subject to change without notice!

7. Ordering example

Basic unit					Optional equipment		
Type	No. of cartridges	Size	Version	Flanged body-type filter	Dust bucket	Fan	Fan and dust bucket
SFK-02	001	DN-020	A..				
			S1.				
			A.V				
			S1V				

8. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and elements can be provided. For more information about installation and operation, please refer to our Instruction Manual.

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Dust collector
SFK-02/03/11 FL

Circular construction

1. Features

This unit is manufactured from sturdy steel sheets. The individual housing parts are fastened together by bolted flanges.

Characteristics

- Conical cartridges for maximum performance
- Compact, save-spacing design
- Modular system
- Easy to maintain
- High separation efficiency
- Low noise level
- Efficient, energy-saving cleaning with jet pulse
- Volume flow range 450 to 7.000 m³/h
- Filter surfaces 9 to 70 m²
- Worldwide distribution

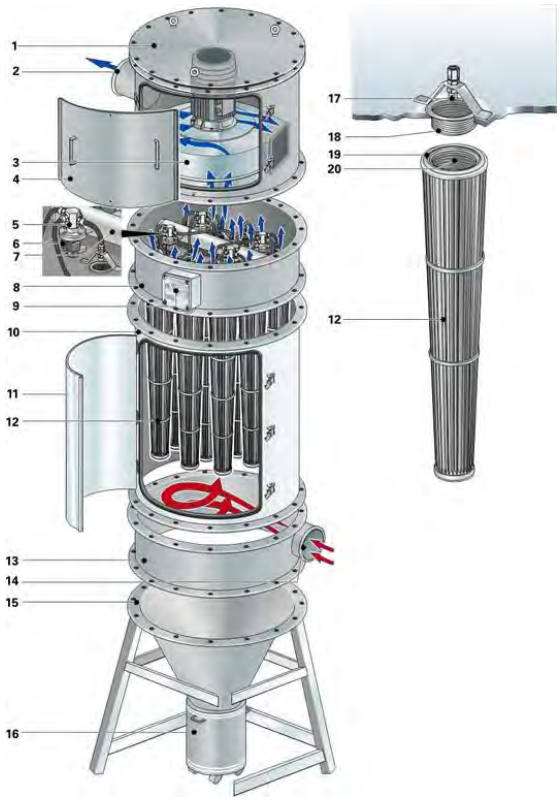
2. Versions

A, Flanged body-type filter with fan

S1, with acoustic hood and dust bucket

S6, with cone and fan

3. Modules and accessories



1 Acoustic hood
2 Blow-out pipe end
3 Fan
4 Maintenance cover, acoustic hood
5 Compressed air distributor
6 Membrane valves
7 Pressure vessel
8 Clean air section
9 Filter controller, time or differential pressure-controlled
10 Untreated gas chamber
11 Maintenance door, dirt air section
12 Cartridge
13 Dust section
14 Dirt air inlet
15 Dust collector hopper with rack
16 Dust bucket
17 Multi-jet nozzle
18 Thread adapter
19 Seal
20 Cartridge, connection thread

4. Functional description

The dust-laden air flows tangentially into the dust section (13). This assures a uniform flow distribution and enables coarse dust particles to be pre-separated. As it flows through the cartridges (12), fine dust is separated on the surface. The filter cake is cleaned off at fixed intervals, depending on the dust load and the filter surface load. The membrane valves (6) are controlled by means of the electronic controller (9) mounted on the side of the filter housing. The detached dust drops down to the bottom and is collected in the dust bucket (16). The cleaned air flows into the clean air section (8) and is discharged at the top of the filter via the blow-out nozzle (2). The fully automatic compressed air cleaning system comprises a pressure vessel with membrane valves (6), an electronic controller (9) and the cleaning nozzles (17).

5. Technical Data

Dust collector

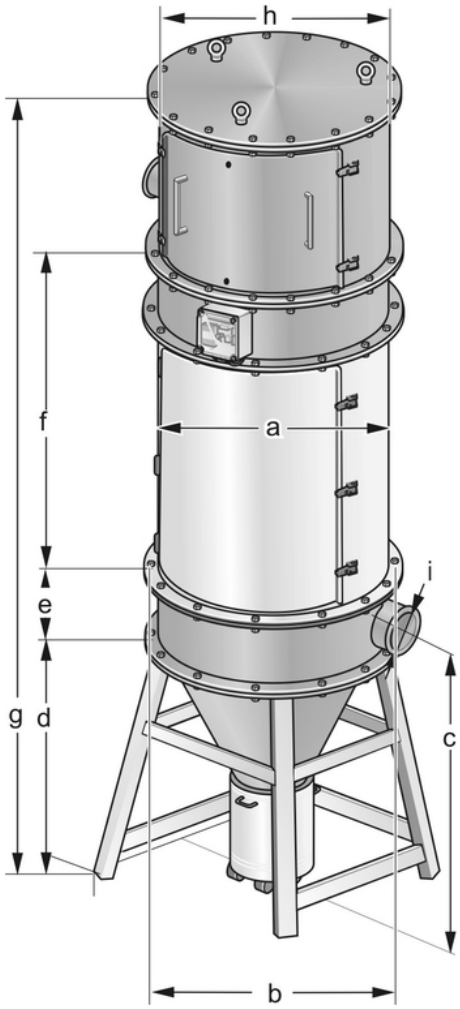
Housing material:	1.0037 (DIN EN 10025) stainless steel optional
Surface protection:	EPS powder coating RAL 7035 light grey
Max. operating pressure:	- 50 mbar
Max. operating temperature:	70 °C without acoustic hood 40 °C with acoustic hood
Dust bucket capacity:	60 l

Cartridges

SFK-02:	Type 852 903 Ti ...* (120 NK data sheet)
SFK-03:	Type 852 904 Ti ...* (120 NK data sheet)
SFK-11:	Type 852 054 Ti ...* (160 NK data sheet)

Cleaning

Cleaning system:	Filtration Group multi-jet nozzle
Medium:	Oil, dust and condensate-free compressed air at operating temperature
Compressed air connection:	G½ female
Compressed air consumption:	SFK-02/03: Approx. 35 l (fad) per cleaning pulse SFK-11: Approx. 80 l (fad) per cleaning pulse
Pulse duration:	0.2 s
Controller:	SFK-02/03: Time controlled (MFS-05 data sheet) SFK-11: Differential pressure-controlled (MFS-05 dp data sheet)
Valves:	Electric membrane valve



* Filter media depends on application

6. Dimensions

Dust collector					Dimensions [mm]								
Type designation	Volume flow* [m³/h]	No. of cartridges	Cartridge length [mm]	Weight** [kg]	a	b	c	d	e	f	g***	h	i
SFK-02 009 DN-056...	450-1080	9	600	120	560	760	1230	1070	260	1005	3095	900	200
SFK-03 009 DN-056...	630-1530		1000	160						1405	3495		
SFK-02 015 DN-071...	750-1800	15	600	210	710	1040	1230	1070	320	1005	3155	1000	250
SFK-03 015 DN-071...	1050-2550		1000	260						1405	3555		
SFK-11 012 DN-100...	1800-4200	12	1000	350	1000	1040	1520	1320	400	1405	3880	1000	300
SFK-11 016 DN-112...	2400-5600	16		420	1120	1160	1695	1470	450		4395	1120	350
SFK-11 020 DN-125...	3000-7000	20		470	1250	1290	1770	1520	500		4495	1250	400

* These values may vary depending on the nature of the dust, the composition of the air and the filter media

** Weight of S1 type excluding fan and acoustic hood

*** These values may vary depending on the size of the fan

Technical data is subject to change without notice!

7. Ordering example

Basic unit					Optional equipment		
Type	No. of cartridges	Size	Version	Flanged body-type filter	Bucket	Bucket and fan	Product separator with cone
SFK-02	008	DN-053	A..	■			
			S1.		■		
			S1V			■	
			S6.				■

8. Design

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Dust collector
SFK-09

Rectangular type

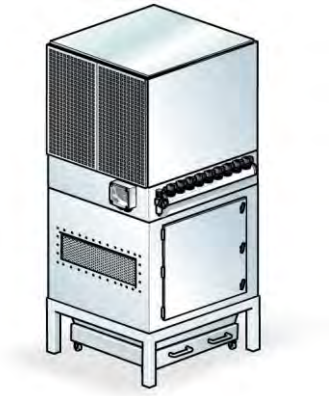
1. Features

This unit is manufactured from sturdy steel sheets. The individual housing parts are assembled from bended metal segments that are bolted together and sealed with silicone-free seals.

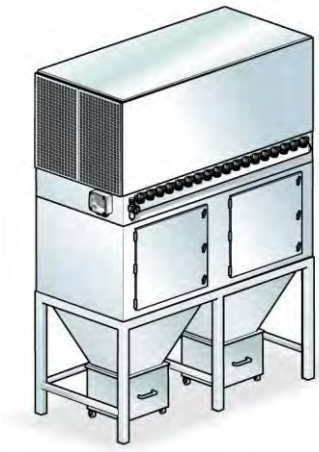
Characteristics

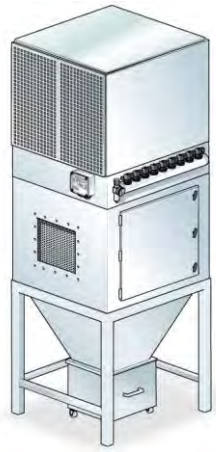
- Compact, space-saving design
- Easy to maintain
- Low noise level
- Efficient, energy-saving cleaning with compressed air by means of Filtration Group Multijet nozzle
- Volume flow range 1800 to 32400 m³/h
- Filter surfaces 48 to 540 m²
- Cartridges changed on the dirt air side
- Worldwide distribution

2. Versions



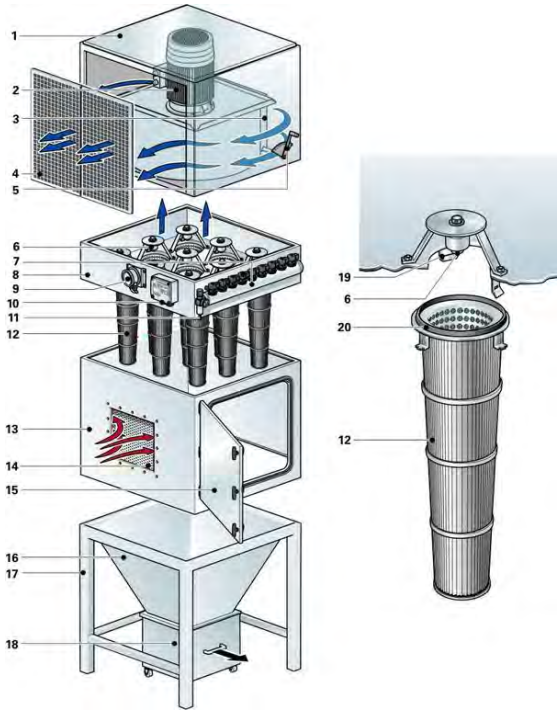
S3, with dust drawer





S1, with dust bucket

3. Modules and accessories



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1		Acoustic hood
2		Fan
3		Lamella valve for volume flow (optional)
4		Blow-out grid
5		Lever for lamella valve for volume flow (optional)
6		Cleaning unit (rotating wing)
7		Pressure vessel with membrane valves
8		Clean air section
9		Differential pressure gauge (optional)
10		Filter controller
11		Pressure reducer
12		Cartridge
13		Dirt air section
14		Dirt air inlet with baffle plate
15		Maintenance door
16		Dust collector hopper
17		Rack
18		Dust bucket
19		Fastening for cartridge
20		Seal

4. Funktional description

The dust-laden air flows into the side of the filter housing (13). The perforated baffle plate (14) in the inlet region assures a uniform flow distribution and enables coarse particles to be pre-separated. As it flows through the cartridge (12), fine dust is separated on the surface. The filter cake is cleaned off at fixed intervals, depending on the dust load and the filter surface load. The detached dust drops down through the hopper (16) and is collected in the bucket (18). The cleaned air flows into the clean air section (8) and is discharged via the blow-out grid (4). The fully automatic compressed air cleaning system comprises a pressure vessel with membrane valves (7), an electronic Δ p controller (10) and the cleaning units (6).

5. Technical Data

Dust collector

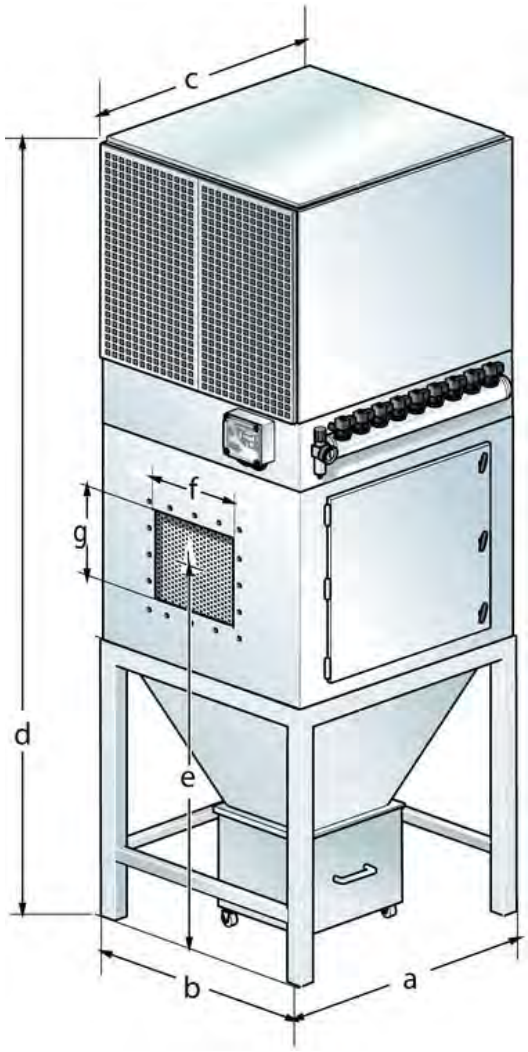
Housing material:	1.0037 (DIN EN 10025)
Surface protection:	EPS powder coating, RAL 7035 light grey
Max. operating pressure:	- 50 mbar
Max. operating temperature:	50 °C without acoustic hood 40 °C with acoustic hood
Dust collector capacity*:	Type S1: 50 l Type S3: 200 l
Maintenance doors:	Sizes 010x1 and 020x16: 1 St. Sizes 024x16 and 029x16: 2 St.
Cartridges	Type 852 032 Ti ...** (328 NKQ data sheet)

Cleaning

Cleaning system:	Filtration Group multijet nozzle
Medium:	Oil, dust and condensate-free compressed air at operating temperature
Compressed air connection:	G½ female
Max. air pressure:	6 bar
Compressed air consumption*:	approx. 60 l to 70 l (fad.) per cleaning cycle
Pulse duration:	0.2 s
Controller:	Δp controlled (MFS-05 dp data sheet)
Valves:	Electric membrane valves

* According to version

** Filter material depending on application



6. Dimensions

Dust collector						Dimensions [mm]					
Type designation	**Volume flow* [m³/h]**	**No. of cartridges**	**Size**	**Type of construction**	**Weight** [kg]**	**a**	**b**	**c**	**d**	**e**	**fxg**
SFK-09 004 010x10 S1...	1800 - 7200	4	010x10	S1	800	1015	1015	1100	3636	1500	300x300
SFK-09 004 010x10 S3...				S3	780				3356	1220	
SFK-09 009 016x16 S1...	4050 - 16200	9	016x16	S1	1630	1615	1615	1600	4567	2130	450x450
SFK-09 009 016x16 S3...				S3	1470				3786	1349	
SFK-09 012 020x16 S1...	5400 - 21600	12	020x16	S1	2090	2035		2020	4567	2130	600x600
SFK-09 012 020x16 S3...				S3	1940				3786	1349	
SFK-09 015 024x16 S1...	6750 - 27000	15	024x16	S1	2410	2455		2440	4567	2130	2x450x450
SFK-09 015 024x16 S3...				S3	2180				3786	1349	
SFK-09 018 029x16 S1...	8100 - 32400	18	029x16	S1	2780	2875		2860	4567	2130	
SFK-09 018 029x16 S3...				S3	2520				3786	1349	

* These values may vary depending on the nature of the dust, the composition of the air and the filter media.

** Weight with fan and acoustic hood. These values may vary depending on the size of the fan.

Technical data is subject to change without notice!

7. Ordering example

Basic unit				Optional equipment	
Type	**No. of cartridges**	**Size**	**Version**	**Dust bucket**	**Dust drawer**
SFK-09	018	016 x 16	S1		
			S3		

8. Design

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Dust collector
SFR-08

Rectangular type

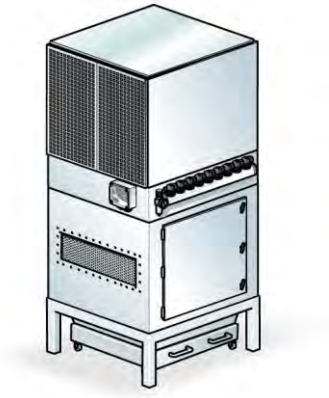
1. Features

This unit is manufactured from sturdy steel sheets. The individual housing parts are assembled from bended metal segments that are bolted together and sealed with silicone-free seals.

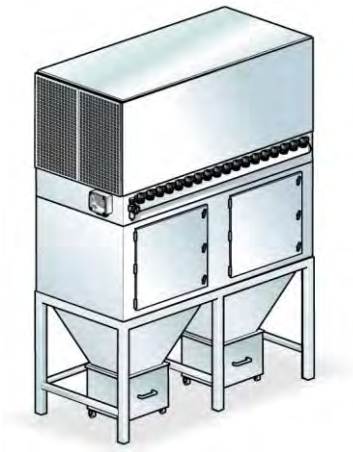
Characteristics

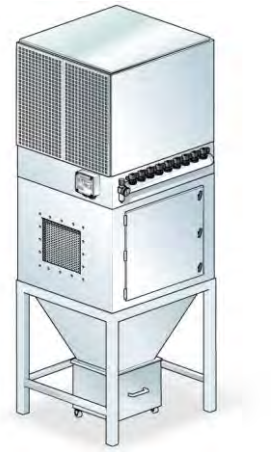
- Compact, space-saving design
- Easy to maintain
- Low noise level
- Efficient, energy-saving cleaning with compressed air by means of Filtration Group rotating wing
- Volume flow range 5400 to 26900 m³/h
- Filter surfaces 135 to 360 m²
- Cartridges changed on the dirt air side
- Worldwide distribution

2. Versions



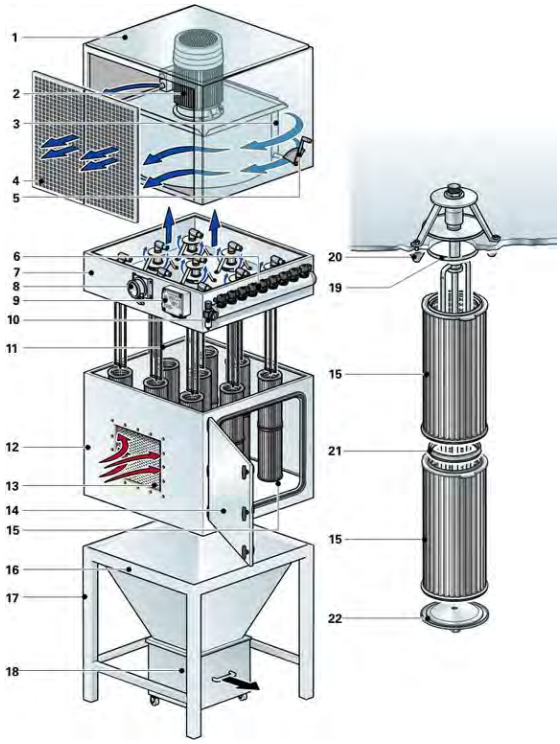
S3, with dust drawer





S1, with dust bucket

3. Modules and accessories



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1	Acoustic hood
2	Fan
3	Lamella valve for volume flow (optional)
4	Blow-out grid
5	Lever for lamella valve for volume flow (optional)
6	Pressure vessel with membrane valves
7	Clean air section
8	Differential pressure gauge (optional)
9	Filter controller
10	Pressure reducer
11	Cleaning unit (rotating wing)
12	Dirt air section
13	Dirt air inlet with baffle plate
14	Maintenance door
15	Cartridge
16	Dust collector hopper
17	Rack
18	Dust bucket
19	Centre ring
20	Holding bolt
21	Double centre ring
22	Reusable end cap

4. Funktional description

The dust-laden air flows into the side of the filter housing (12). The perforated baffle plate (13) in the inlet region assures a uniform flow distribution and enables coarse particles to be pre-separated. As it flows through the cartridge (15), fine dust is separated on the surface. The filter cake is cleaned off at fixed intervals, depending on the dust load and the filter surface load. The detached dust drops down through the hopper (16) and is collected in the bucket (18). The cleaned air flows into the clean air section (7) and is discharged via the blow-out grid (4). The fully automatic compressed air cleaning system comprises a pressure vessel with membrane valves (6), an electronic Δ p controller (9) and the cleaning units (11).

5. Technical Data

Dust collector

Housing material: 1.0037 (DIN EN 10025)
Surface protection: EPS powder coating, RAL 7035 light grey
Max. operating pressure: - 50 mbar
Max. operating temperature: 70 °C without acoustic hood
40 °C with acoustic hood
Dust collector capacity*: Type S1: 50 l
Type S3: 200 l
Maintenance cover (doors): Sizes 016x16 and 020x16: 1 St.
Sizes 024x16 and 029x16: 2 St.

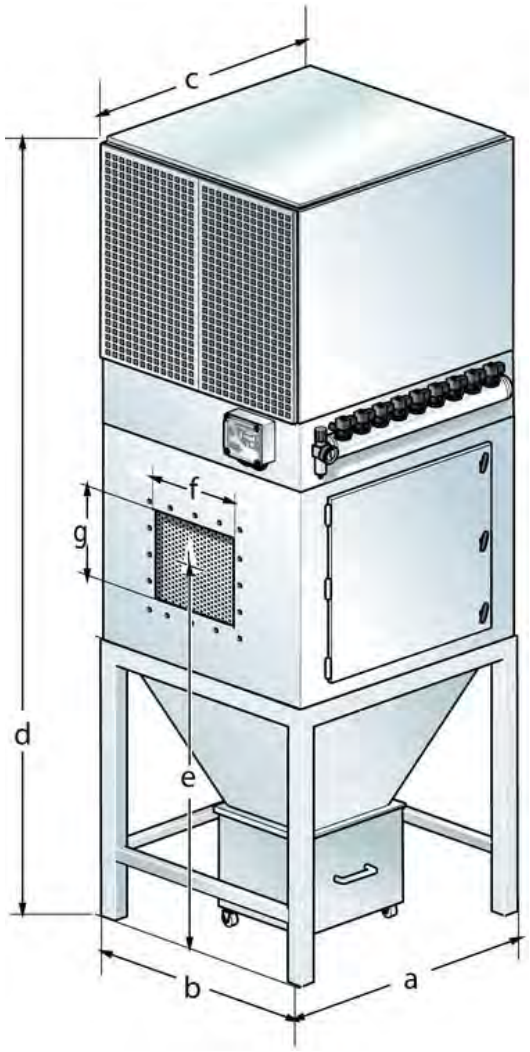
Cartridges

Type 852 908 Ti ...**
(328 NZ data sheet)

Cleaning

Cleaning system: Filtration Group rotating wing
Medium: Oil, dust and condensate-free compressed air at operating temperature
Compressed air connection: G½ female
Max. air pressure: 4 bar
Compressed air consumption*: approx. 60 l to 70 l (fad.) per cleaning cycle
Pulse duration: 1.5 s
Controller: Δp controlled
(MFS-05 dp data sheet)
Valves: Electric membrane valves

* According to version
** Filter media depending on application



6. Dimensions

Dust collector						Dimensions [mm]					
Type designation	Volume flow* [m³/h]	No. of cart-ridges	Size	Type of con-struction	Weight [kg]	a	b	c	d	e	f x g
SFR-08 018 016x16 S1	5400 - 14400	18	016x16	S1	1630	1615	1615	1600	4567	2130	450x450
SFR-08 018 016x16 S3				S3	1470				3786	1349	450x450
SFR-08 024 020x16 S1	7200 - 18800	24	020x16	S1	2090	2035		2020	4567	2130	600x600
SFR-08 024 020x16 S3				S3	1940				3786	1349	600x600
SFR-08 030 024x16 S1	9000 - 22200	30	024x16	S1	2410	2455		2440	4567	2130	2x450x450
SFR-08 030 024x16 S3				S3	2180				3786	1349	
SFR-08 036 029x16 S1	10800 - 26900	36	029x16	S1	2780	2875		2860	4567	2130	
SFR-08 036 029x16 S3				S3	2520				3786	1349	

* These values may vary depending on the nature of the dust, the composition of the air and the filter media.

Technical data is subject to change without notice!

7. Ordering example

Basic unit				Optional equipment	
Type	**No. of cartridges**	**Size**	**Version**	**Dust bucket**	**Dust drawer**
SFR-08	018	016x16	S1		
			S3		

8. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and elements can be provided. For more information about installation and operation, please refer to our Instruction Manual.

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Dust collector
SFR-09

Rectangular type

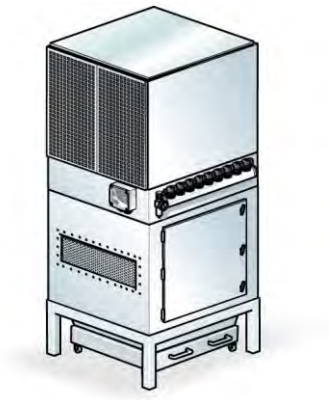
1. Features

This unit is manufactured from sturdy steel sheets. The individual housing parts are assembled from bended metal segments that are bolted together and sealed with silicone-free seals.

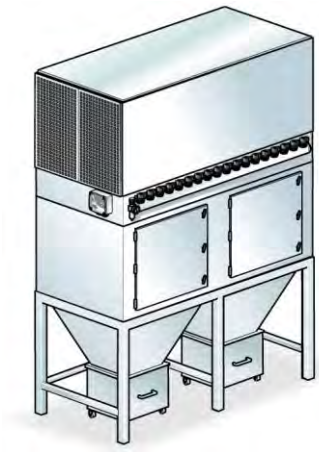
Characteristics

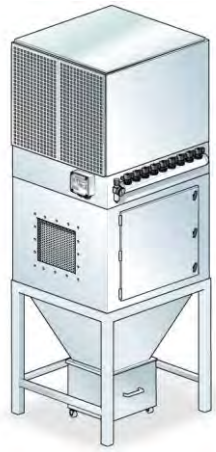
- Compact, space-saving design
- Easy to maintain
- Low noise level
- Efficient, energy-saving cleaning with compressed air by means of Filtration Group rotating wing
- Volume flow range 1800 to 32400 m³/h
- Filter surfaces 60 to 270 m²
- Cartridges changed on the dirt section
- Worldwide distribution

2. Versions



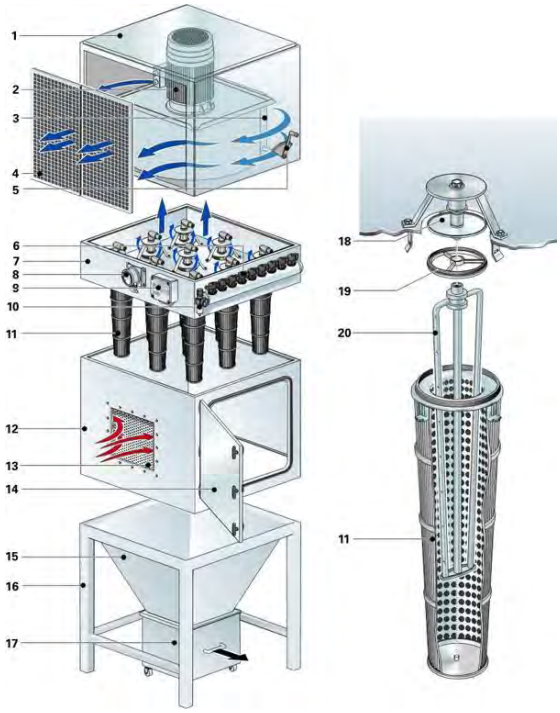
S3, with dust drawer





S1, with collection bin

3. Modules and accessories



.

1	Fan silencer
2	Fan
3	Volume control damper (optional)
4	Discharge grille
5	Adjusting lever for volume control damper (optional)
6	Pressure vessel with membrane valves
7	Clean section
8	Differential pressure gauge (optional)
9	Cleaning controller
10	Pressure reducer
11	Cartridge
12	Dirt section
13	Air inlet with baffle plate
14	Access door
15	Discharge hopper
16	Support frame
17	Collection bin
18	Dam plate
19	Center ring
20	Cartridge cleaning nozzle (rotating wing)

4. Funktional description

The dust-laden air flows into the side of the filter housing (12). The perforated baffle plate (13) in the inlet region assures a uniform flow distribution and enables coarse particles to be pre-separated. As it flows through the cartridge (11), fine dust is separated on the surface. The filter cake is cleaned off at fixed intervals, depending on the dust load and the filter surface load. The detached dust drops down through the hopper (15) and is collected in the bin (17). The cleaned air flows into the clean section (7) and is discharged via the discharge grille (4). The fully automatic compressed air cleaning system comprises a pressure vessel with membrane valves (6), an electronic Δ p controller (9) and the cleaning nozzles (20).

5. Technical Data

Dust collector

Housing material: 1.0037 (DIN EN 10025)

Surface protection: EPS powder coating RAL 7035 light grey

Max. operating pressure: - 50 mbar

Max. operating temperature: 50 °C without fan silencer
40 °C with fan silencer

Dust collector capacity*: Type S1: 50 l
Type S3: 200 l

Access doors: Sizes 010x10 to 020x16: 1 x
Sizes 024x16 and 029x16: 2x

Cartridges

Type 852 032 Ti ...**
(338 NKQ data sheet)

Cleaning

Cleaning system: Filtration Group rotating wing

Medium: Oil, dust and condensate-free compressed air at operating temperature

Compressed air connection: G½ female

Compressed air: 4 bar (max. 6 bar)

Compressed air consumption*: Approx. 60 l to 70 l (fad) per cleaning pulse

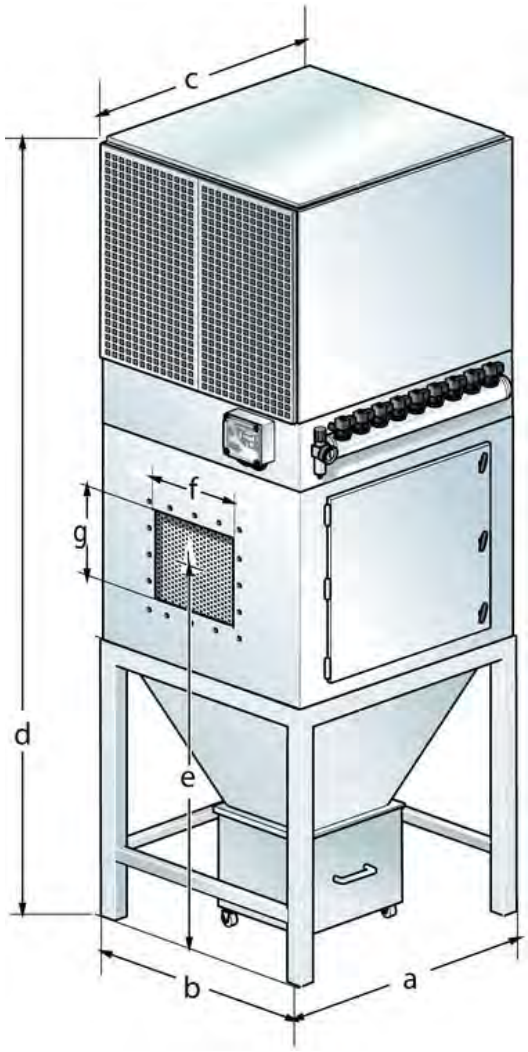
Pulse duration: 1.5 s

Controller: Δ p controlled
(MFS-05 dp data sheet)

Valves: Electric membrane valves

* Depending on version

** Filter media depending on application



6. Dimensions

Dust collector						Dimensions [mm]					
Type designation	Volume flow* [m³/h]	No. of cart-ridges	Size	Ver-sion	Weight** [kg]	a	b	c	d	e	fxg
SFR-09 004 010x10 S1...	1800 - 7200	4	010x10	S1	800	1015	1015	1100	3636	1500	300x300
SFR-09 004 010x10 S3...				S3	780				3356	1220	
SFR-09 009 016x16 S1...	4050 - 16200	9	016x16	S1	1630	1615	1615	1600	4567	2130	450x450
SFR-09 009 016x16 S3...				S3	1470				3786	1349	
SFR-09 012 020x16 S1...	5400 - 21600	12	020x16	S1	2090	2035		2020	4567	2130	600x600
SFR-09 012 020x16 S3...				S3	1940				3786	1349	
SFR-09 015 024x16 S1...	6750 - 27000	15	024x16	S1	2410	2455		2440	4567	2130	2x450x450
SFR-09 015 024x16 S3...				S3	2180				3786	1349	
SFR-09 018 029x16 S1...	8100 - 32400	18	029x16	S1	2780	2875		2860	4567	2130	
SFR-09 018 029x16 S3...				S3	2520				3786	1349	

* These values may vary depending on the nature of the dust, the composition of the air and the filter media.

** Weight with fan and fan silencer. These values may vary depending on the size of the fan.

Technical data is subject to change without notice!

7. Ordering example

Basic unit				Optional equipment	
Type	**No. of cartridges**	**Size**	**Version**	**Collection bin**	**Dust drawer**
SFR-09	009	016x16	S1		
			S3		

8. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters.
Comprehensive documentation on our product range, cleaning units and elements can be provided. For more information about installation and operation, please refer to our Instruction Manual.

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70355057.04/2019

Control
MFS-05

Time controlled filter controller

1. Features

The Filtration Group filter controller MFS-05 is an easy to operate time control.

Characteristics

- Inexpensive, compact design
- Cleaning with electrically isolated contact
- Instant cleaning with test switch
- Remote signalling by two defined relays: Operation/fault and cleaning optional available
- Remote access to parameters via an RS 485 port (read only) possible
- Worldwide distribution

2. Technical data

Housing

Material:	ABS
Design:	Dust-tight, max. 3x M32/M20 possible, ATEX Ex II 3D T60°C
Protection class:	IP 65
Operating temperature:	0 - 50 °C
Climatic category:	KWF acc. DIN 400040 (≤ 75 % relative humidity, no condensation allowed)

Control lamp

Operation:	LED green
Cleaning:	LED yellow
Fault:	LED red
Valve display:	LED red
Alarm threshold:	LED red

Electrical data

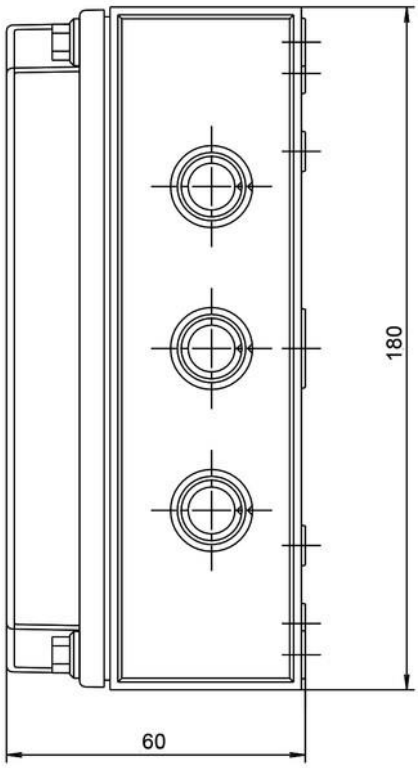
Electrical connection:	Terminal strip 2.5 mm²/valve 1
Voltage (primary):	DC 24 V, AC 230 V/50-60 Hz
Tolerance:	± 10 %
Power:	42 W/30 VA
Mains fuse:	3.15 A time-lag/0.315 A time-lag
Valve outputs:	12 (extendable to 24)
Valve voltage:	DC 24 V
Tolerance:	± 10 %
Valve current:	1 A (for pulse time ≤ 1 s and interval time ≥ pulse time, otherwise 0.5 A)
Relay outputs: (Version with 2 output ralays)	Pin wiring DC 24 V/0.3 A, AC 250/5 A 1 change-over contact for operating/fault message (fail-safe circuit) 1 normaly open for cleaning message
Inputs:	Start or dp input Enable (contact closed)/Stop (contact open) Instant cleaning Fault acknowledgement (button) dp switch (optional)

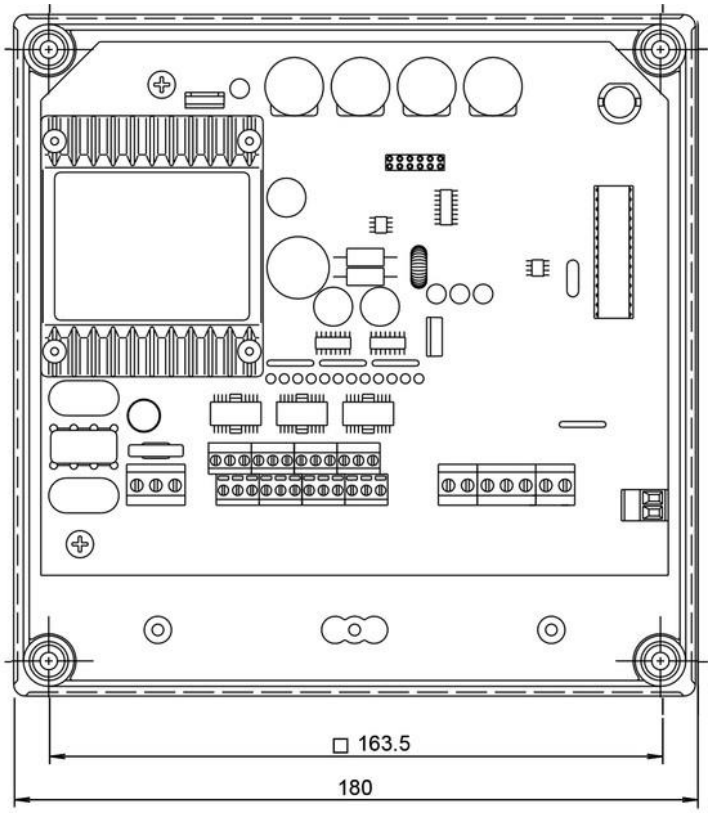
Technical data is subject to change without notice!

3. Order numbers

Order number	Type designation
79743071	MFS-05 DC 24 V, standard
79743477	MFS-05 DC 24 V, 2 relay outputs
79743055	MFS-05 AC 230 V, 50 - 60 Hz, standard
79742974	MFS-05 AC 230 V, 50 - 60 Hz, 2 relay outputs

4. Dimensions





5. Accessories

Order number	Designation
76109664	Valve extension 13 to 24
76186605	Replacement fuses for MFS-05 24 V, 3.15 A time-lag (pack of 5)
76186597	Replacement fuses for MFS-05 230 V, 0.315 A time-lag (pack of 5)

6. Default settings

The controller is delivered with a standard setting to facilitate optimum operation in almost any application. This setting should be checked when the controller is started up for the first time. A service expert can be called in if necessary to alter the setting in the field.
Comprehensive documentation for our product range, cleaning units and cartridges can be provided.
For more information about installation and operation, please refer to our Instruction Manual.

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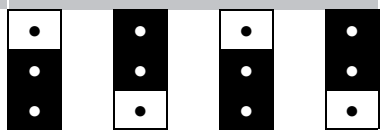
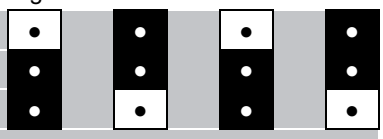
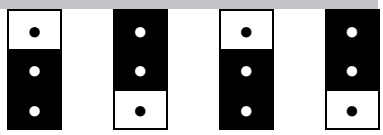
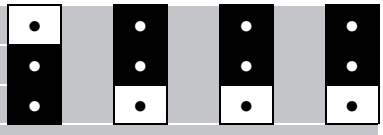
76399125.04/2019

Filter controller
Default settings
MFS-05

Parameter	Comments	Default
No. of valves	setting no. of valves	n
Break time		600 divided by number of valves
Pulse time	Pressure cleaning Rotating wing	0.2 s 1.5 s
Post-cleaning time		18 min
□ Selection Time control*	1. Pressure switch function off (not activated) 2. 4 to 20 mA activated 3. Basic setting threshold 4. End complete cycle	
Note:	In the standard setting, terminals 16 and 17, 18 and 19 are bridged.	
□ Selection Time control with 5 mbar pressure switch switch-on threshold	1. Pressure switch function off (not activated) 2. 4 to 20 mA activated 3. Basic setting threshold 4. End complete cycle	
Note:	In the standard setting, terminals 16 and 17 are bridged. The switching contact of the Δp pressure switch is connected to terminals 18 and 19.	
* or with variable pressure switch, e.g. setting range 5 to 33 mbar		
□ Selection Time control with 18 mbar pressure switch as alarm output	1. Pressure switch function off (not activated) 2. 4 to 20 mA activated 3. Basic setting threshold 4. End complete cycle	
Note:	In the standard setting, terminals 16 and 17, 18 and 19 are bridged. The contact of the pressure switch can be used as a signal for higher-level control.	
□ Selection Control External p transmitter with analog output (4 to 20 mA)	1. Pressure switch function off (not activated) 2. 4 to 20 mA activated 3. Basic setting control 4. End complete cycle	
Note:	Terminal 16 is not assigned. Analog input (terminals 17+ and 18-). The post-cleaning has a fixed pause time of 30 s.	

The filter control MFS-05 is delivered with these parameters.

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Control
MFS-05 dp

Differential pressure-controlled filter controller

1. Features

The Filtration Group MFS-05 dp filter controller reduces the number of cleaning cycles to a necessary minimum compared to the simple time control principle. It facilitates a longer cartridge service life, improved cleaned gas values, smaller variations in the volume of exhaust air and lower costs for compressed air. The filter controller can be operated in three different modes:

1 . Interval time control: Cyclic cleaning with a variable interval time (time between two cleaning cycles) according to dp
2 . Switching threshold control: A cleaning cycle is tripped when settable dp threshold is reached
3 . Time control: Cyclic cleaning with a fixed interval time

Characteristics

- Inexpensive, compact design
- Settable number of cleaning cycles when the dp threshold is reached
- Remote signalling by three defined relays: Operation/fault, cleaning and settable dp alarm
- Cleaning through potential free contact
- Instant cleaning with test switch
- Remote access to parameters via an RS 485 port (read only) possible
- Digital dp display (0 - 40 mbar)
- Worldwide distribution

2. Technical data

Housing

Material:	ABS
Design:	Dust-tight, max. 3x M32/M20 possible, ATEX Ex II 3D T60°C
Protection class:	IP 65
Operating temperature:	0 - 50 °C
Climatic category:	KWF acc. DIN 400040 (≤ 75 % relative humidity, no condensation allowed)

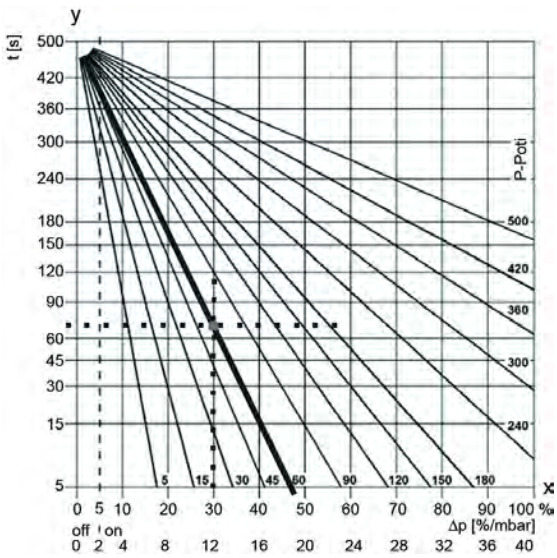
Control lamp

Operation:	LED green
Cleaning:	LED yellow
Fault:	LED red
Valve display:	LED red
Alarm threshold:	LED red

Electrical data

Electrical connection:	Terminal strip 2,5 mm²/valve 1
Voltage (primary):	DC 24V, AC 230 V/50-60 Hz
Tolerance:	± 10 %
Power:	42 W/30 VA
Mains fuse:	3.15 A time-lag, 0.315 A time-lag
Valve outputs:	12 (extendable to 24)
Valve voltage:	DC 24 V
Tolerance:	± 10 %
Valve current:	1 A (for pulse time ≤ 1 s and interval time ≥ pulse time, otherwise 0.5 A)
Relay outputs:	Pin wiring DC 24 V/0.3 A, AC 250/5 A
Analogue output:	0 (4) ... 20 mA
Inputs:	Start or dp input Enable (contact closed)/ Stop (contact open) Post-cleaning Instant cleaning Fault acknowledgement (button)

Technical data is subject to change without notice!

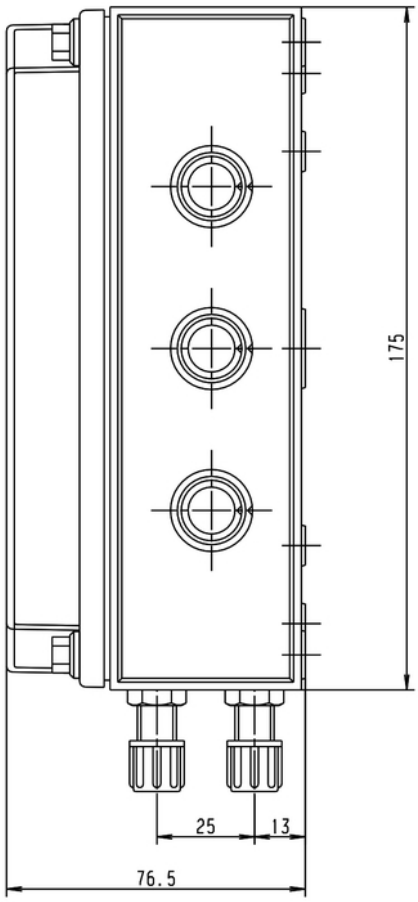


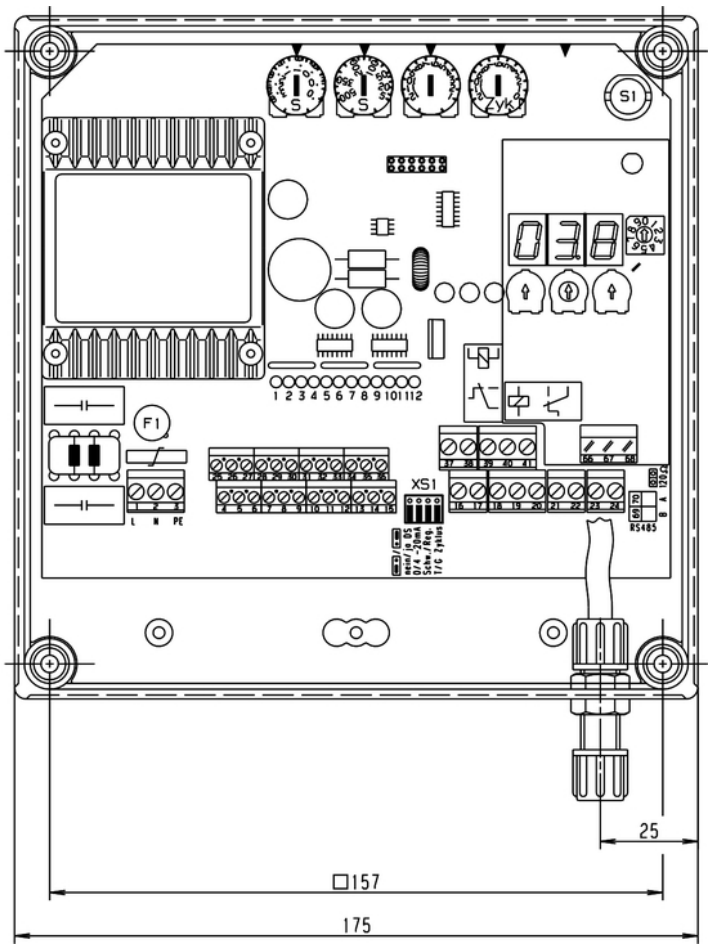
Controller characteristics
x = dp measuring range [%/mbar]
y = interval time t [s]
P-Poti = interval time potentiometer

3. Order numbers

Order number	Type designation
76341846	MFS-05 dp DC 24 V, relay
76341838	MFS-05 dp AC 230 V, 50-60 Hz, relay

4. Dimensions

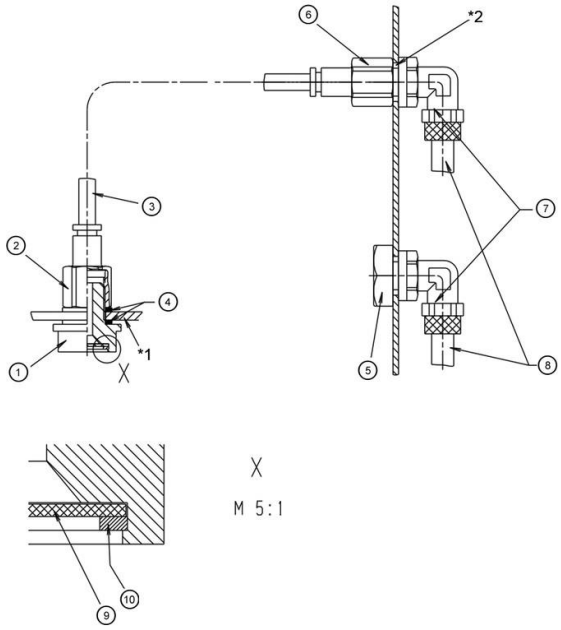




5. Instrument lead set

A set comprising a pressure sensor and instrument lines can be supplied for measuring the differential pressure. Dust protection in the form of a membrane filter is provided at the measuring point for the raw gas. Dirty instrument lines can lead to errors and breakdowns.

Item	Designation
①	Nipple G¼, a/f 21
② ⑥	Screw nut on fitting R¼ OD6, a/f 16
③	Plastic hose PU-4 black, approx. 2 m
④	Sealing ring PVDF
⑤	Pipe nut DIN 431-A-G¼ - 14H
⑦	2x angular screw joint R¼ OD8
⑧	Compressed air hose PU-6 blue, approx. 1.5 m
⑨	Membrane filter
⑩	Snap ring 15x1 DIN 472



*1 = bore Ø 13.5 mm in the filter plate
*2 = bore 2x Ø 14 mm in the housing

6. Accessories

Order number	Designation
76109664	MFS-05 extension
79759846	Instrument lead set for dp sensor
76186605	Replacement fuses for MFS-05 dp 24 V, 3.15 A time-lag (pack of 5)
76186597	Replacement fuses for MFS-05 dp 230 V, 0.315 A time-lag (pack of 5)

7. Default settings

The controller is delivered with a default setting to facilitate optimum in almost any application. This setting should be checked when the controller is started up for the first time. A service engineer can be called in if necessary to alter the setting in the field.
Comprehensive documentation for our product range, cleaning units and cartridges can be provided.
For more information about Installation and operation, please refer to our Instruction Manual.

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Filter controller
Default settings
MFS-05 dp

Parameter	Comments	Default	Operation
	"Break time control" operating mode		
No. of valves	Observe the notes in chapter 6 of the instruction manual when making settings	n	
Break potentiometer	Controller characteristic curve chapter 10.9 of the instruction manual	60	
Pulse time	Pressure cleaning Rotating wing	0.1 s 1.5 s	
Post-cleaning cycles		0	
Alarm threshold		18 mbar	
Terminal configuration	see wiring diagram		
Jumpers positions	Jumper Sch./Reg. Jumper T/G cycle	Top Top	
	Operating mode "Switching threshold"		
Obere Schwelle		14 mbar	
Cleaning cycles		1	
Terminal configuration	see wiring diagram	Bridge 18 a. 19	
Jumpers positions	Jumper Sch./Reg. Jumper T/G **cycle**	Below Top	
	"Time control" operating mode		
Terminal configuration	Terminals 16 and 17, 18 and 19 are bridged		
Break time	600 divided by number of valves n	xx	
Jumpers positions	Jumper Sch./Reg. Jumper T/G Zyklus	Below Top	

The filter control MFS-05 dp is delivered with these parameters.

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Control
MFS-09

Differential pressure-controlled filter controller

1. Features

The Filtration Group MFS-09 filter controller reduces the number of cleaning cycles to a necessary minimum compared to the simple time control principle. It facilitates a longer cartridge service life, improved cleaned air values, smaller variations in the volume of exhaust air and lower costs for compressed air.
The filter controller can be operated in seven different modes:

1 . Differential pressure related cleaning
2 . Variable break time (dp-related)
3 . Time controlled cleaning
4 . Pressure switch function
5 . Post cleaning
6 . After-run time for discharge argans
7 . Cycle counting (option)

Characteristics

- Differential value free selectable 0 bis 10 ... 100 mbar
- Digital display of the and current valve
- Exact setting of pulse and break time
- 2 free selectable dp alarms (min./max.)
- 15 LED for operating and fault display
- Flexible selection of functions by menu control, input by 4 buttons
- Optocoupler input for stop, post cleaning, fault acknowledgement and pressure switch
- 3 free selectable relay outputs for operating and fault display
- RS 485 port
- Worldwide distribution

2. Technical data

Housing

Material:	Makrolon
Design:	Dust-tight, max. 10 PG-boltings possible, ATEX Ex II 3D T60°C
Protection class:	IP 65
Operating temperature:	0 - 50 °C
Climatic category:	KWF acc. DIN 400040 (≤ 75 % relative humidity, no condensation allowed)
Control elements:	4 pushbuttons

Displays

Operation:	7 segment display (2 decimal places), 6 LEDs
Δp regulator	7 segment display (4decimal places), 5 LEDs
General:	4 LEDs

Electrical data

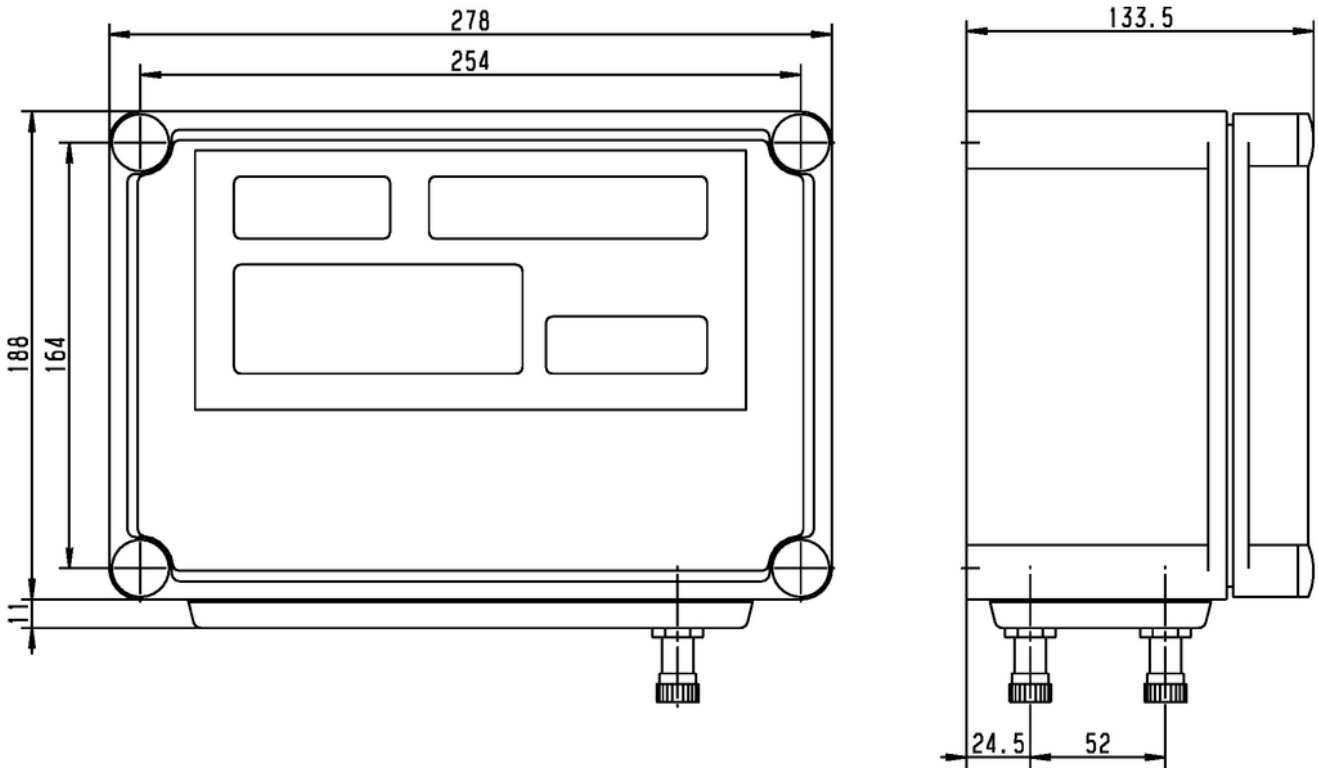
Electrical connection:	Terminal strip 2.5 mm²
Voltage (primary):	DC 24V, AC 115 V/50-60 Hz, AC 230 V/50-60 Hz
Tolerance:	± 10 %
Power:	30 W/30 VA
Mains fuse:	3.15 A time-lag/0.315 A time-lag
Valve outputs:	12 (extendable to 24)
Valve voltage:	DC 24 V
Tolerance:	± 10 %
Valve current:	1 A (for pulse time ≤ 1 s and interval time ≥ pulse time, otherwise 0.5 A)
Analogue output:	0 (4) ... 20 mA
Relay outputs:	3 relay change-over contact, AC 24 V, 5 A
Inputs:	Stop Post-cleaning Fault acknowledgement (Reset-Hold) Pressure switch

Technical data is subject to change without notice!

3. Order numbers

Order number	Type designation
76109490	MFS-09 DC 24 V, 12 valve outputs
76109508	MFS-09 DC 24 V, 24 valve outputs
76109474	MFS-09 AC 115/230 V, 50-60 Hz, 12 valve outputs
76109482	MFS-09 AC 115/230 V, 50-60 Hz, 24 valve outputs

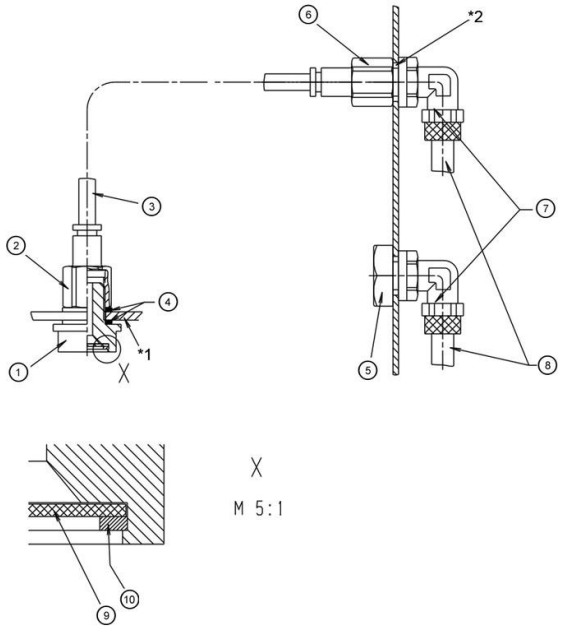
4. Dimensions



5. Instrument lead set

A set comprising a pressure sensor and instrument lines can be supplied for measuring the differential pressure. Dust protection in the form of a membrane filter is provided at the measuring point for the dirt air. Dirty instrument lines can lead to errors and breakdowns.

Item	Designation
①	Nipple G¼, a/f 21
② ⑥	Screw on fitting R¼ OD6, a/f 16
③	Plastic hose PU-4 black, approx. 2 m
④	Sealing ring PVDF
⑤	Pipe nut DIN 431-A-G¼ - 14H
⑦	2x angular screw joint R¼ OD8
⑧	Compressed air hose PU-6 blue, approx. 1.5 m
⑨	Membrane filter
⑩	Snap ring 15x1 DIN 472



*1 = bore Ø 13.5 mm in the filter plate
*2 = bore 2x Ø 14 mm in the housing

6. Accessories

Order number	Designation
76109730	Instrument lead set for dp sensor MFS-09
76186605	Replacement fuses for MFS-09 24 V, 3.15 A time-lag (pack of 5)
76186597	Replacement fuses for MFS-09 115/230 V, 0.315 A time-lag (pack of 5)

7. Default settings

The controller is delivered with a default setting to facilitate optimum in almost any application. This setting should be checked when the controller is started up for the first time. A service engineer can be called in if necessary to alter the setting in the field.
Comprehensive documentation on our product range, cleaning units and cartridges can be provided.
For more information about installation and operation, please refer to our Instruction Manual.

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79791815.04/2019

FG Fluid Solutions
Filtration Group

MAHLE Industrialfiltration is now Filtration Group. For more information, visit www.fluid.filtrationgroup.com

Dust extraction technology
Adapter for conical cartridges

Rd72x5 threaded connection

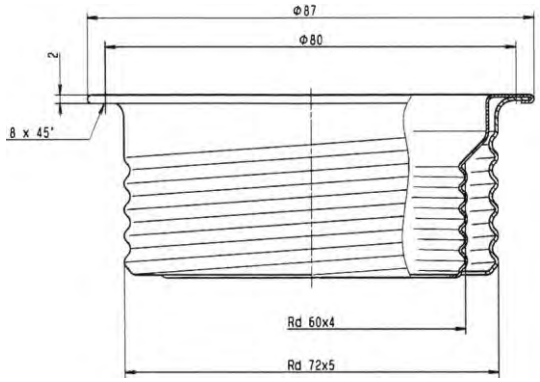
1. Features

The Filtration Group adapter system allows high-quality Filtration Group conical cartridges to be used in dust removal equipment where previously cylindrical cartridges with an Rd60x4 threaded connection were suitable.
The cartridges can also be adapted to third-party equipment. If a cartridge is replaced, the adapter can continue to be used.

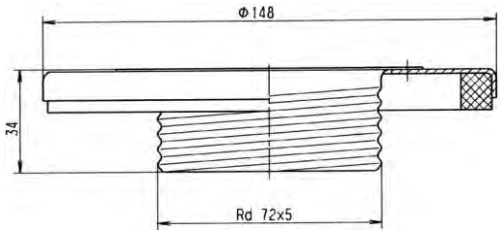
Characteristics

- Easy installation of the cartridge thanks to the proven assembly system
- Wide choice of standard cartridges available
- Lower warehousing costs owing to reduced type diversity
- Worldwide distribution

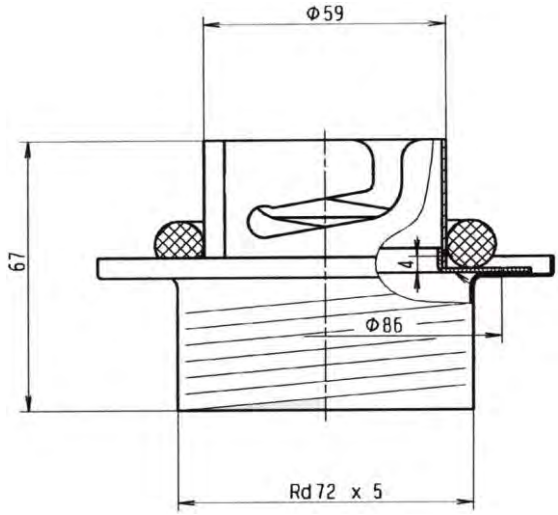
2. Technical data



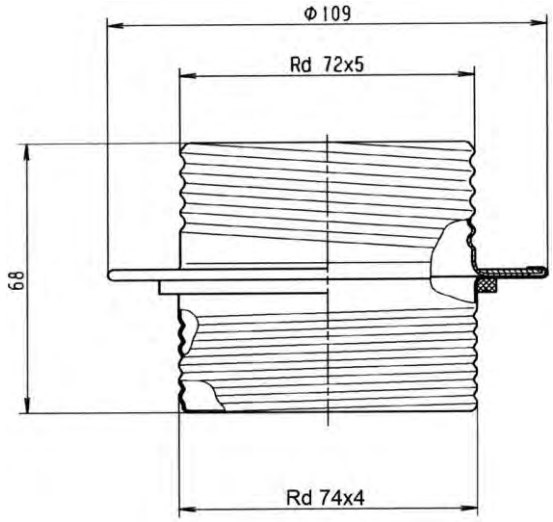
Rd60x4 to Rd72x5 adapter



Rd72x5 adapter for installation on the clean side



Bayonet to Rd72x5 adapter



Rd74x4 to Rd72x5 adapter

Technical data subject to change without notice!

3. Order numbers

Order number	Type designations	Material
78330508	Adapter RD60x4/RD72x5 VZK	VZK
76315329	Adapter RD60x4/RD72x5 V4A	V4A
78314445	Adapter cleaned gas RD72x5 VZK	VZK
78314528	Adapter cleaned gas RD72x5 V4A	V4A
79756131	Adapter RD72x5/Bajonett VZK	VZK
76139950	Adapter RD74x4/RD72x5 V4A	V4A

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70342686.04/2019

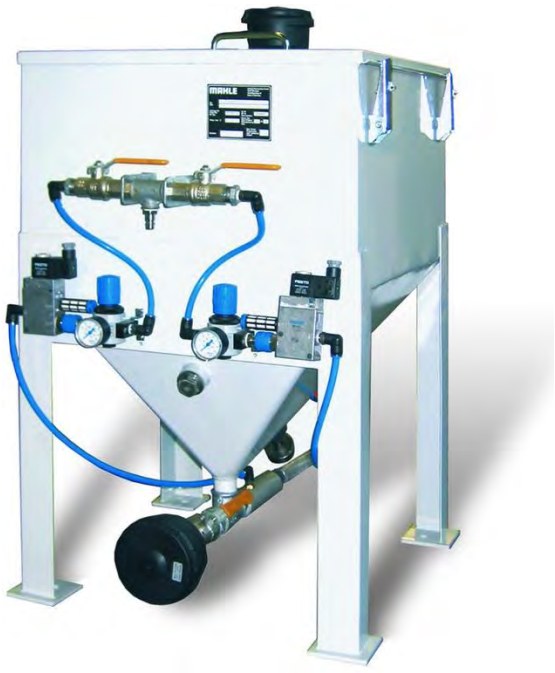
Dust extraction technology
SDG-100

Dosing device for filter aid

1. Features

A filter aid sometimes needs to be added to optimise the dust removal process. The filter aid is blown into the row gas via an injector nozzle, so that it forms a filter aid layer on the cartridges. This improves the cleaning and filtration efficiency in applications with sticky or very fine dusts.

- Compact design
- Easy maintenance
- Affordable
- Good dispersion
- Worldwide distribution



2. Technical data

Operating pressure:	3 - 4 bar
Housing/cover material:	Sheet steel
Surface treatment:	EPS
Colour:	RAL 7035
Electrical data:	
Max. voltage:	DC 24 V
Max. switching current:	1 A

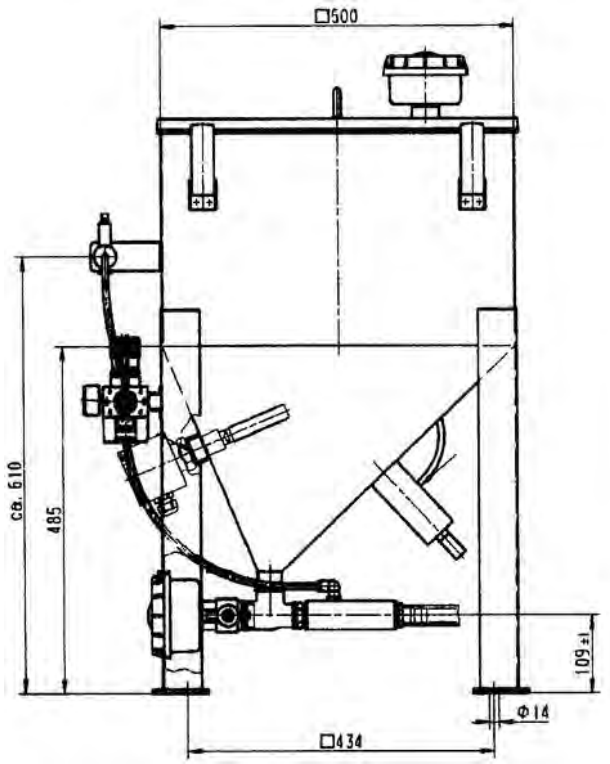
The selected filter aid depends on the type of dust and the untreated gas.
The compressed air consumption varies according to the dosing setting.

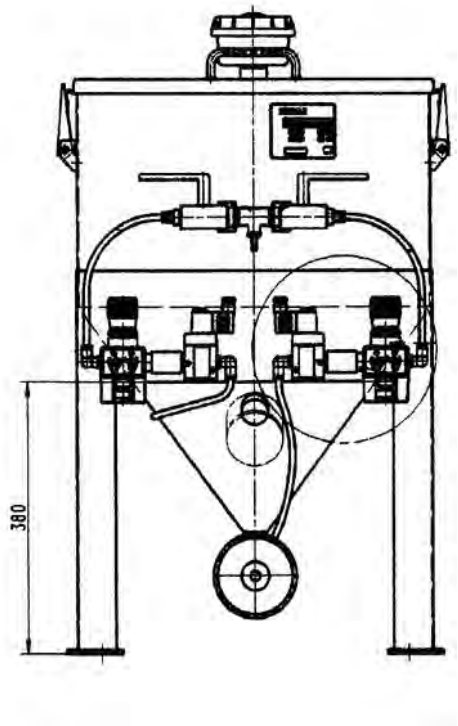
Typical range:	0,2 - 2 m³/h (normal operation)
Filter aid dosing rate:	0,3 - 3,5 kg/h

3. Dimensions

All dimensions except "V" in mm.

Type	H	B	L	V [l]
SDG-100	877	504	504	50





4. Components/spare parts

Qty.	Part name
2	Magnetic valve ¼"
2	Solenoid DC 24 V/1 A
2	Pressure valve with gauge
2	Ball valve ½"
1	Injector nozzle
1	Piston vibrator
1	Discharge hose
2	Vent filter Pi 0140 Mic
1	Level limit switch (optional)
1	Control cabinet for dosing device (optional)

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70328226.04/2019

Dust removal filters for combustible dusts
Information

ATEX-compliant dust removal filters

1. Features

Explosion protection is stipulated for combustible dusts by the 94/9/EC Directive.

Particles are separated and upgraded on the raw gas side of a cleanable dust removal filter. The dust cloud that is frequently produced when the filter cartridges are cleaned will cause an explosion in the presence of a sufficiently large spark. To avoid the risk of explosion when combustible dusts are separated, explosion-proof designs in line with ATEX regulations have been specified for Filtration Group dust removal filters together with an engineering consultant.

A hazard analysis and risk assessment based on DIN EN 13463 provide the starting point for appraising the suitability of a particular application and selecting the device type. The hazard analysis evaluates the possible explosion hazards and the probability of occurrence of potentially explosive atmosphere. The analysis presupposes that the filtration device will be for its "intended purpose" and that it is divided into an installation chamber and a process chamber (zones). The possible explosion hazards to be considered are described in DIN EN 1127-1. Hazard analyses are documented for the various applications of Filtration Group dust removal filters.

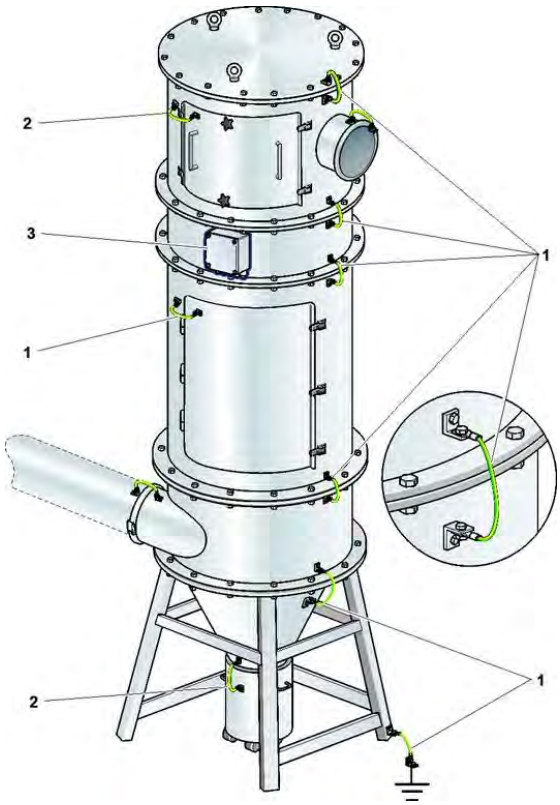
2. Selection of the dust removal filter

The dust removal filter is selected according to the minimum ignition energy of the dust and the envisaged application. Filtration Group dust removal filters for installation in Zone 22 are designed with the Ex II 3D c T140 °C type of protection.

Dust removal filter	Minimum ignition energy	Type of dust
Type A	> 10 mJ	Normally flammable
Type A or Type B *	Between 3 and 10 mJ	Highly flammable
Type B	< 3 mJ	Extremely flammable

* Type B must be selected if the dust removal filter is to be used for one of the following purposes: pneumatic conveying, central aspiration or suction, separation downstream of a drying or grinding process, suction with mechanical conveyors operating at a speed of more than 1 m/s or separation of self-igniting powder.

3. Type A dust removal filter in basic ATEX design with proactive explosion protection



Entstaubungsgerät mit vorbeugendem Explosionsschutz

1 . Earth conductor or equipotential bonding conductor
2 . Quick-disconnect earth conductor
3 . Filter controller or terminal box, category II 3D

Characteristics

- Equipotential bonding conductors on all housing parts, incl. earth connection
- ATEX-compliant electrical components with the appropriate type of protection, e.g. filter controller, magnetic valve, electric motor, level indicator for Zone 22
- Terminal strip for connecting more than one magnetic valve to a filter controller or control cabinet
- Filter cartridges capable of electrostatic discharge (Filtration Group standard, even for a minimum ignition energy > 4 mJ)

Operating principle

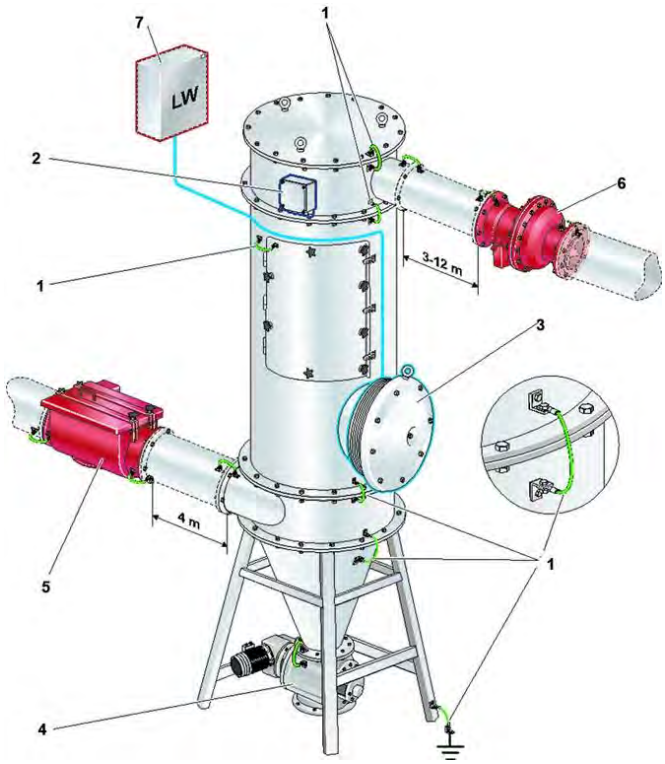
Static electricity cannot build up in the basic ATEX version, so that sparking and explosion are ruled out. Sparking must be reliably prevented. If this is not possible, a type B dust removal filter must be used instead.

4. Type B dust removal filter in explosion-proof ATEX design

In the case of the explosion-proof design, the dust removal filter must be decoupled from explosions in the raw and clean gas lines. All plant components connected upstream or downstream are then protected against dust explosion propagation. The dust is discharged either in an explosion-proof bucket or by means of a flameproof discharge device.

Explosion protection by decoupling a dust removal filter in explosion-proof design with explosion release.

Example 1: Decoupling with a quick-acting valve and check valve



1 . Earth conductor or equipotential bonding conductor
2 . Filter controller or terminal box
3 . Explosion-tested air release valve with integrated flame absorber
4 . Rotary valve
5 . Explosion-tested check valve
6 . VENTEX quick-closing valve
7 . Control room or cabinet

Explosion-proof dust removal filter with air release valve

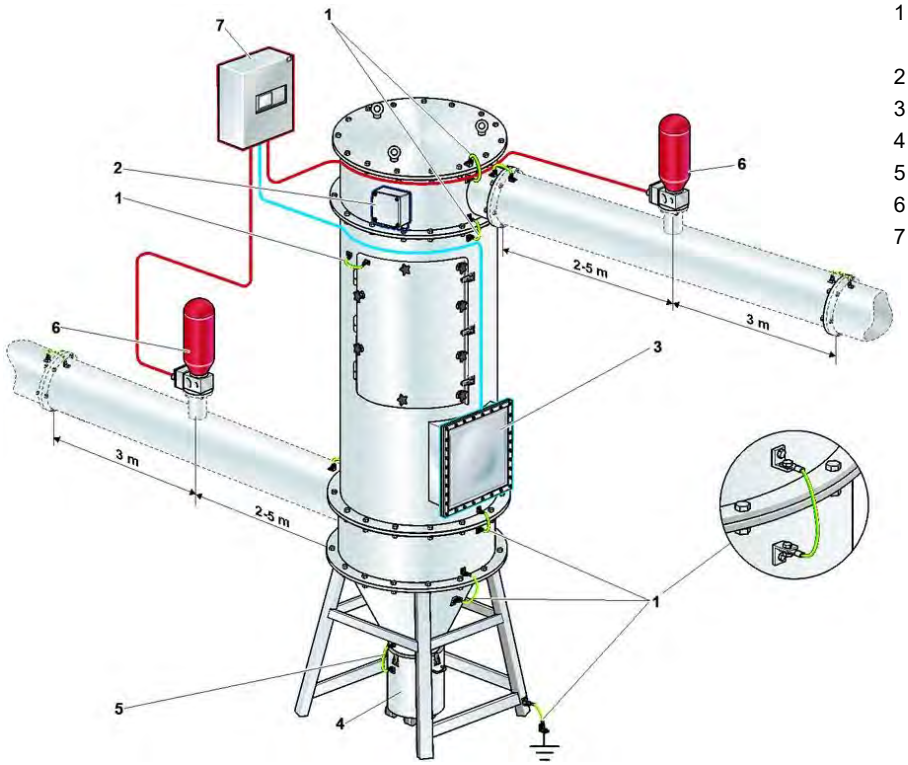
Characteristics

- Equipotential bonding conductors on all housing parts, incl. earth connection
- ATEX-compliant electrical components with the appropriate type of protection, e.g. filter controller, magnetic valve, electric motor, level indicator for Zone 22
- Terminal strip for connecting more than one magnetic valve to a filter controller or control cabinet
- Filter cartridges capable of electrostatic discharge (Filtration Group standard, even for a minimum ignition energy > 4 mJ)
- Max. dust constant (Kst value): 300 bar m/s
- Signal transmitter on the air release valve for recording explosions
- Quick-acting valve and check valve for decoupling explosions
- Pressure burst resistance of the housing: 0.5 bar

Operating principle

At the start of an explosion, the fitted spring contact sends a signal to the control room (7) as soon as the air release valve (3) opens. The transmission of the signal causes all electrical components to be disconnected. The check valve on the raw gas side (5) closes automatically by mechanical means in a fraction of a second when the explosion begins. A quick-acting shut-off device (6) decouples the explosion on the clean gas side (6), e.g. the automatic VENTEX quick-closing valve or an active fire barrier. Alternatively, the air release valve (3) can be replaced by a rupture disc or a quench pipe and the rotary valve (4) by a dust bucket.

Example 2: Decoupling with extinguishing agent



1 . Earth conductor or equipotential bonding conductor
2 . Filter controller or terminal box
3 . Rupture disc
4 . Dust bucket with clamping lever
5 . Quick-disconnect earth conductor
6 . Extinguishing agent bottles
7 . Switch box

Explosion-proof dust removal filter with rupture disc

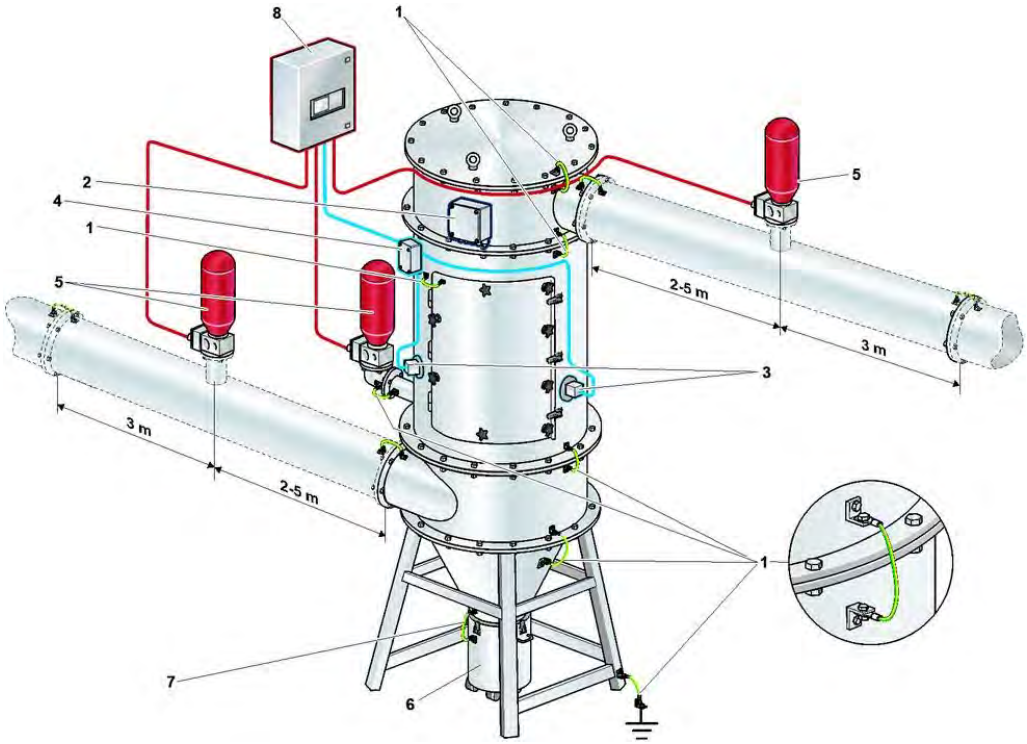
Characteristics

- Equipotential bonding conductors on all housing parts, incl. earth connection
- ATEX-compliant electrical components with the appropriate type of protection, e.g. filter controller, magnetic valve, electric motor, level indicator for Zone 22
- Terminal strip for connecting more than one magnetic valve to a filter controller or control cabinet
- Filter cartridges capable of electrostatic discharge (Filtration Group standard, even for a minimum ignition energy > 4 mJ)
- Max. dust constant (Kst value): 300 bar m/s
- Rupture disc with breakwire as a signal transmitter
- Extinguishing agent bottles for decoupling explosions
- Pressure burst resistance of the housing: 0.5 bar

Operating principle

At the start of an explosion, the rupture disc (3) opens at a defined set pressure and the signal is transmitted to the switch box by the breakwire (7). The transmission of the signal causes the extinguishing agent bottles (6) to be activated. The extinguishing agent expelled via the pipes on the raw and clean gas sides prevents the flame front from propagating. At the same time, the signal disconnects all electrical components. Alternatively, the rupture disc (3) can be replaced by an air release valve or a quench pipe and the dust bucket (4) by a rotary valve.

Explosion protection by suppressing the explosion in a dust removal filter in explosion-proof design



Explosion-proof dust removal filter with extinguishing agent bottles

1 . Earth conductor or equipotential bonding conductor
2 . Filter controller or terminal box
3 . Pressure sensor
4 . Socket for pressure sensor
5 . Extinguishing agent bottles
6 . Dust bucket with clamping lever
7 . Quick-disconnect earth conductor
8 . Switch box

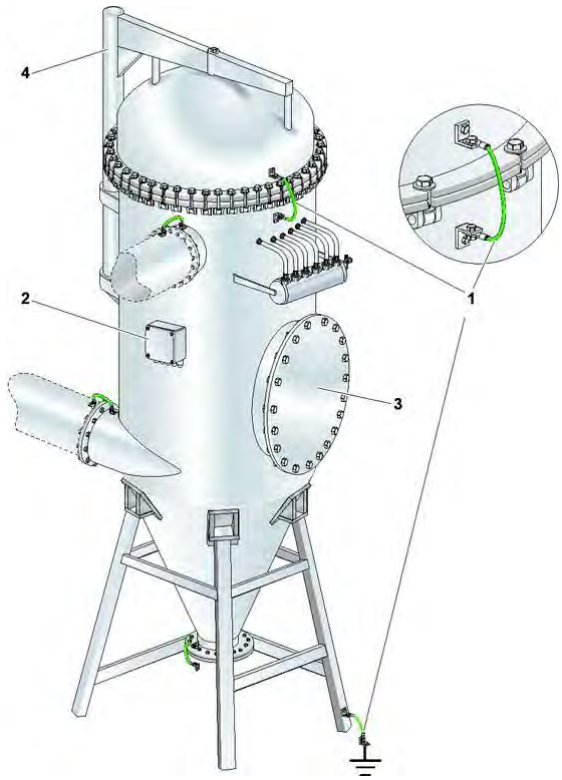
Characteristics

- Equipotential bonding conductors on all housing parts, incl. earth connection
- ATEX-compliant electrical components with the appropriate type of protection, e.g. filter controller, magnetic valve, electric motor, level indicator for Zone 22
- Terminal strip for connecting more than one magnetic valve to a filter controller or control cabinet
- Filter cartridges capable of electrostatic discharge (Filtration Group standard, even for a minimum ignition energy > 4 mJ)
- Max. dust constant (Kst value): 300 bar m/s
- Extinguishing agent bottle(s) on the dust removal filter for suppressing explosions
- Extinguishing agent bottles in the pipes on the raw and clean gas sides for decoupling explosions
- Pressure burst resistance of the housing: 0.5 bar

Operating principle

At the start of an explosion, the pressure increase is recorded by two separate pressure sensors (3) and the extinguishing agent bottles (5) are activated by the high-speed electronics. Inside the dust removal filter, the flame is suppressed by the extinguishing agent, so that the explosion pressure is reduced. The number of explosion agent bottles depends on the volume of the raw gas side, the maximum explosion pressure, the dust constant and the ignition temperature. If this pressure reduction is ensured by optimising the design of the dust removal filter, it is possible to minimise the explosive action such that additional pressure relief can be dispensed with. The extinguishing agent expelled via the pipes on the raw and clean gas sides prevents the flame front from propagating. At the same time, the signal from the switch box (8) disconnects all electrical components. Alternatively, the dust bucket (6) can be replaced by a rotary valve.

Explosion protection with dust removal filter in explosion-proof design



Explosion-proof dust removal filter

1 . Earth conductor or equipotential bonding conductor
2 . Filter controller or terminal box
3 . Manhole
4 . Swinging gallows

Characteristics

- Equipotential bonding conductors on all housing parts, incl. earth connection
- ATEX-compliant electrical components with the appropriate type of protection, e.g. filter controller, magnetic valve, electric motor, level indicator for Zone 22
- Terminal strip for connecting more than one magnetic valve to a filter controller or control cabinet
- Filter cartridges capable of electrostatic discharge (Filtration Group standard, even for a minimum ignition energy > 4 mJ)
- Dust constant (Kst value) corresponding to the approval for the decoupling elements
- Explosion decoupling must be provided for the dust removal filter in the raw and clean gas lines
- Dust removal filter design optimised for the maximum explosion pressure

Operating principle

In the event of an explosion, the maximum explosion pressure is absorbed by the robust housing. The steel is not stressed beyond the yield point in accordance with the design. All electronic components can be disconnected by tripping an optional pressure switch. Cabinet optional.

5. Type examination with explosion test

The stable design of our apparatus is confirmed by an FSA test certificate. A pressure burst resistance of 0.5 bar was demonstrated in a test series with selectively induced explosions. The devices thus comply with the test requirements of EN 14460 "Explosion resistant equipment".





6. Design

Please contact us for detailed technical information, any open questions and for general expert advice. Completion of the relevant questionnaire would facilitate in the coordination of all important parameters. Comprehensive documentation on our product range, cleaning units and elements can be provided. For more information about installation and operation, please refer to our Instruction Manual

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70373951.05/2019

Aerosol separator device
ASL 1 - 4

Nominal volume flow up to 3600 m³/h

1. Features

High-performance device for separating cooling lubricants from machine tool exhaust air

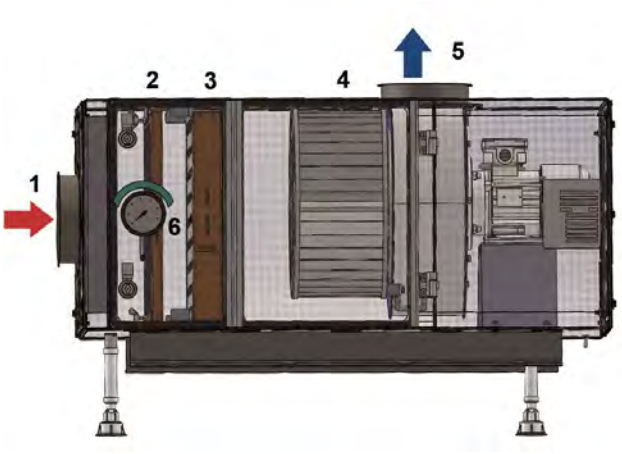
In industrial machining and shaping processes – such as in modern machine tools – cooling lubricants are used under high pressure. This sends more aerosols into the ambient air. To prevent the aerosol concentrations from exceeding the permitted limits, the cooling lubricant mist must be continuously extracted from the machine's work area and cleaned. Filtration Group aerosol separator devices efficiently protect workers, equipment and production facilities from cooling lubricant aerosols and improve their productivity.

Characteristics

- Extraction of damaging aerosols right at the processing machine
- Can be used for aqueous cooling lubricant applications or applications with oil aerosols less than 20 mg/m³
- High energy efficiency
- Modular structure of the individual filter stages
- Optional H13 filter stage
- Modular design for direct installation of main components into the processing machine
- Small space requirements
- Long maintenance interval and service-friendly operation
- Cleanable and reuseable individual filter stages
- Extensive accessories
- Optimal price-performance ratio
- Worldwide distribution and service

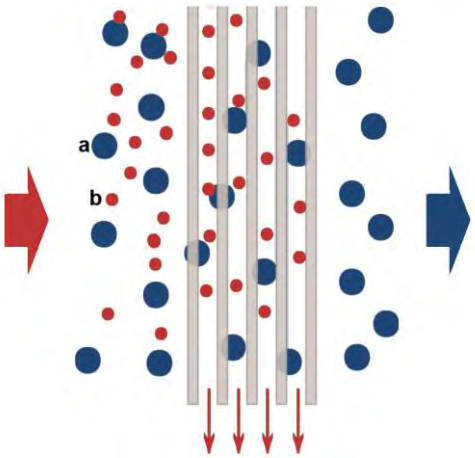
2. Functional principle

The raw air from the area of the machine tools is extracted with a powerful fan (5). The raw air flows through each filter stage. The wire mesh pre-filter stage (1) removes the large dirt particles (chips, coarse dirt) and protects the downstream separation stages from contamination. Additionally, at this stage the large aerosols are separated through turbulence and gravity. The primary separation stage (2) removes the coarse to fine aerosols. The secondary separation stage (3) removes the very fine aerosols. The largest share of fine aerosols can be separated thanks to a local acceleration of the stream via perforated baffle plate and a subsequent slowdown in a multi-layered Miofilter panel. A star pleated fine filter element (4) can be used additionally to remove the remaining very fine aerosols from airstream.
The bottom of the housing collects the separated aerosol, which is sent through a drain hose into the storage tank for cooling lubricant. The transported air quantity depends strongly on the stage of expansion of tthe ASL and can vary during operation in dependency of each filter stage´s contamination.
The gauge (6) measures the adjacent vacuum before the first filter stage and is an indicator for the actually funded volume flow.



1 Wire mesh pre-separator
2 Primary separation stage
3 Secondary separation stage
4 Fine filter
5 Fan
6 Maintenance indicator (analog gauge)

3. Procedural principle



Aerosols going through the separation plates

4. Application area

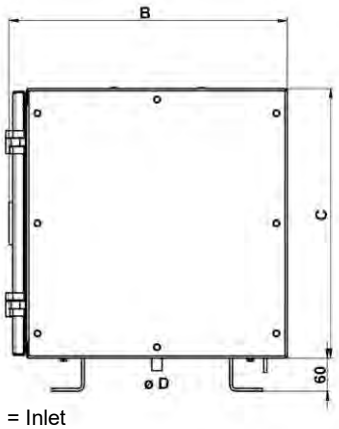
Suitable for:
- water-mixable cooling lubricants for machine tools
- non-water-mixable cooling lubricants (cutting, grinding and drilling oil) at raw gas load less than 20mg/m³

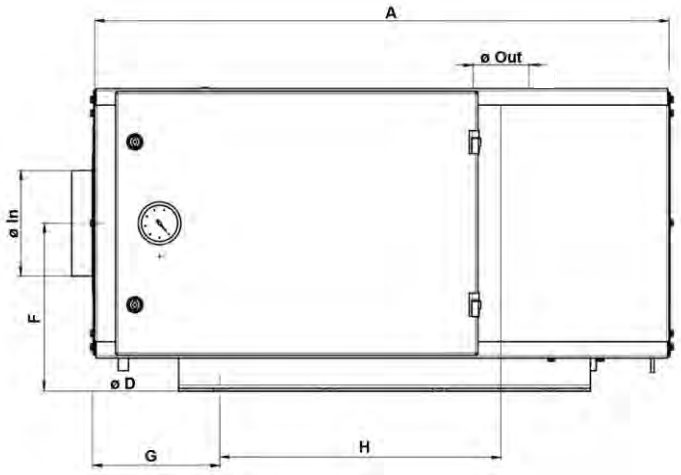
Other special applications on request.

Limits of use:
Set-up in potentially explosive atmospheres (zones 0, 1 and 2) is not permitted!
Extraction of toxic or hazardous substances is not permitted!

a Air
b Aerosoles

5. Dimensions





In = Inlet
Out = Outlet
D = Drain

All Dimension except "D" in mm

Type	A ±3	B ±3	C ±3	D	F	G	H	In	Out
ASL 1	860	475	400	$G^3/_8$	260	160	445	DN 150	DN 150
ASL 2	1056	512	490	$G^3/_8$	305	235	512	DN 200	DN 150
ASL 3	1310	625	900	$G^3/_8$	510	355	541	DN 300	DN 300
ASL 4	1510	805	1100	$G^3/_8$	610	455	502	DN 300	DN 300

6. Technical specification

	ASL 1	ASL 2	ASL 3	ASL 4
Operating volumetric flow m³/h:	500	1000	2000	3600
Operating temperature range °C:	+10 bis +50	+10 bis +50	+10 bis +50	+10 bis +50
Motor voltage VAC/50 Hz:	400	400	400	400
Power consumption A:	1	1.35	2.7	6.5
Motor power kW:	0.37	0.55	1.1	3
Protection class:	IP 54	IP 54	IP 54	IP 54
Motor speed U/min:	2800	2800	2840	2880
Sound level dB (A):	74	74	73	72
Raw gas connection mm:	DN 150	DN 200	DN 300	DN 300
Clean gas connection mm:	DN 150	DN 150	DN 300	DN 300
Drain hose:	15x2 mm PVC transparent (5.5 m)			
Dimensions LxBxH mm:	860x475x400	1056x512x550	1310x625x960	1510x805x1160
Weight kg:	70	85	150	190

7. Type number key

Type number key with order example ASL 2.2			
Type			
ASL	Aerosol Separator Light		
	Series		
	1	up to 500 m³/h, recommended extraction area up to 2 m³	
	2	up to 1000 m³/h, recommended extraction area up to 4 m³	
	3	up to 2000 m³/h, recommended extraction area up to 8 m³	
	4	up to 3600 m³/h, recommended extraction area up to 16 m³	
		Filterstufen	
		1	Pre-separator incl. Mio-filter
		2	Pre-separator incl. Mio-filter and fine filter
ASL	**2**	**2**	**ASL bis 900 m³/h mit Vorabscheider, Miofilter und Feinfilter** (Auswahlbeispiel)

8. Order numbers

Part designation	Order number
ASL 11 RAL 7035	72429284
ASL 12 RAL 7035	72416648
ASL 21 RAL 7035	72373051
ASL 22 RAL 7035	72383123
ASL 31 RAL 7035	72406570
ASL 32 RAL 7035	72395791
ASL 41 RAL 7035	72439127
ASL 42 RAL 7035	72437692

9. Spare parts

Part designation	Fig. position in functional principle	Order number			
		ASL 1	ASL 2	ASL 3	ASL 4
Pre-separator	1	72366908	72373140	72352822	72392822
Primary separation stage element	2	72417927	72374686	72388445	72438238
Secondary separation stage element	3	72417939	72374780	72388983	72438243
Fine filter	4	72418905	72382322	2x 72382322	3x 72382322
HEPA filter	not shown	-			
Fan	5	72454474	72420067	72459040	72458466
Maintenance indicator (analog gauge)	6	72388574			
Service kits	not shown	see 10.1 Service kits			

10. Accessories and options

10.1 Service kits
The filter stages in the ASL unit are clean- and reusable. It is useful to order a service kit with the new device to avoid a standstill of machines during the cleaning and drying of elements.
Service kits
ASL 11 Order-no. 72425205
ASL 12 Order-no. 72425206
ASL 21 Order-no. 72422335
ASL 22 Order-no. 72425124
ASL 31 Order-no. 72422380
ASL 32 Order-no. 72425204
ASL 41 Order-no. 72439391
ASL 42 Order-no. 72439389

☞ **Please also read our cleaning recommendation for fine and Mio-filter.**

10.2 Suspended solids filter (HEPA downstream filter stage)
For very high requested quality of cleaned air in recirculation mode, there is an option to add a Filtration Group filter (HEPA) downstream. HEPA downstream filters (class H13) are standardly available with filter surfaces about 3.5 m², 7 m ², 12 m² or 16 m². Preparing of a HEPA downstream filter stage depends strongly on the application and that´s why they are only available on request.

10.3 Silencer
Suitable silencer including mounting material can be prepared and offered if necessary.

10.4 Height adjustable racks
for installing/mounting the unit besides a tooling machine (on request).

10.5 Piping kits
Optimal piping concepts and kits can be prepared and offered on request.

10.6 Desired finishes
The units are standardly powder coated with RAL7035.
Other RAL colours are available on request.

11. Questionnaire for requests

Checklist for Aerosol separation systems

Filtration Group®
Filtering The World

Customer data

Date

Company

Contact person | Function

Phone number | E-Mail

Adress

Information on the tooling machine

Manufacturer | Model | Year of construction

Type of processing: ◯ Turning ◯ Milling ◯ Grinding ◯ Others

Machine housing: ◯ None ◯ Partial housing ◯ Complete housing ◯ Other

Maschine utilization: ◯ Single-shift ◯ Double-shift ◯ Three-shift

Processed material

Information on the cooling lubricant

Type of cooling lubricant: ◯ Water-miscible (e.g. emulsion) ◯ Non water-miscible (e.g. oil)

Name according to safety data sheet

Minimal qantity lubrication (MQL): ◯ Yes ◯ No

Evacuation system and aerosol separator

If an aerosol separator is already in use:

Manufacturer | Model | Year of construction

Number and position of the evacuation points

Size of the evacuation ports: ◯ DN 100 ◯ DN 150 ◯ DN 200 ◯ Others

Position of the separator: ◯ On top of the machine ◯ Next to the machine

Exhaust air: ◯ Recirculation in the hall ◯ Extraction to the outside

What else may be important:

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72397644.04/2019

Aerosol Separator Device
LGA 601 FU/FUW

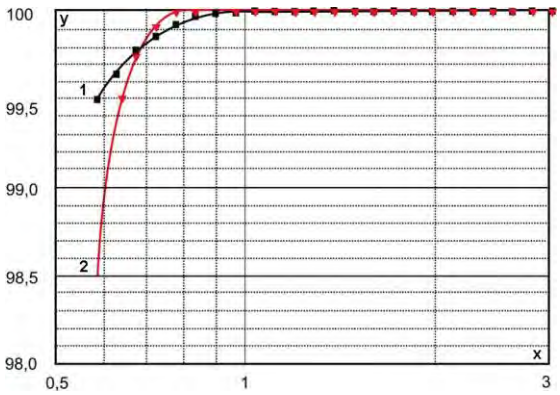
Nominal volume flow 600 m³/h

1. Features

High performance aerosol separator device for separation of coolant from tooling machine exhaust air

- Excellent retention rates 100 % at 1 µm aerosols
- Suitable for high raw gas loads up to 3000 mg/m³
- Equipped with high-efficient coalescer elements
- High dirt holding and optimized service life
- Pre-separation system for optimized service life
- HEPA filter stage available for more efficiency
- Low maintenance and energy system
- Modular design for direct installation of main components onto tooling machines
- Quality filters, easy to service
- Low space requirements
- Worldwide distribution and service
- Numerous accessories

2. Fractional collection efficiency

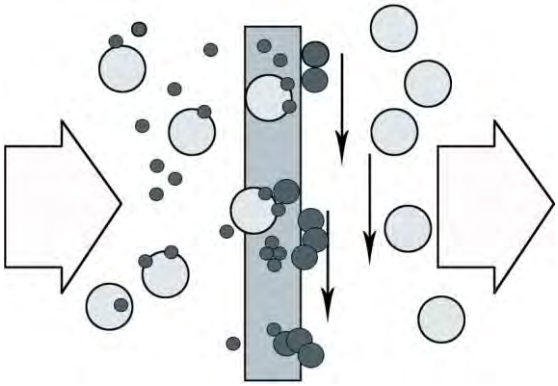


x = Particle size in µm
y = Fractional retention rate in %

Aerosol: Wiolan SH 10
Raw gas concentration: 50 mg/m³
Volume flow: 600 m³/h

1 = Filter cartridge as delivered
2 = Filter cartridge after 100 operating hours

3. Operating principle



Oil aerosols are sucked away from the machining space of machine tools. The oil-laden air flows outward through the coalescer element from the inside. The oil attaches itself to the fibre media as it passes through the filter. Minute oil droplets "coalesce" to form larger drops. These larger droplets migrate downwards on the coalescer element due to gravity. The oil accumulates at the bottom of the housing and is returned to the cooling lubricant storage reservoir via the oil drain hose and the membrane valve. The vacuum in the filter housing causes external air to be sealed off by the membrane valve. The valve opens automatically when the oil in the drain hose reaches a height of at least 500 mm. The cleaned airflow is sucked away by means of a high-pressure fan and blown out at the top through a silencer.

4. Application

Suitable for non-water-miscible cooling lubricants (cutting oil, grinding oil, drilling oil) and oil aerosol exhausted by machine tools and also for water-miscible cooling lubricants.

Operating limits

If oil is used as cooling lubricant for machining processes, air usually has to be sucked away from the working area to prevent the atomized oil from dispersing. The concentrations that often occur in the cooling lubricant jet or in the machine room could result in ignition in case of tool breakage, for example. If the machining process involves flammable cooling lubricants or flammable materials, safe operation must be ensured by providing suitable fire and explosion protection devices in conformance with statutory regulations.

5. Product information

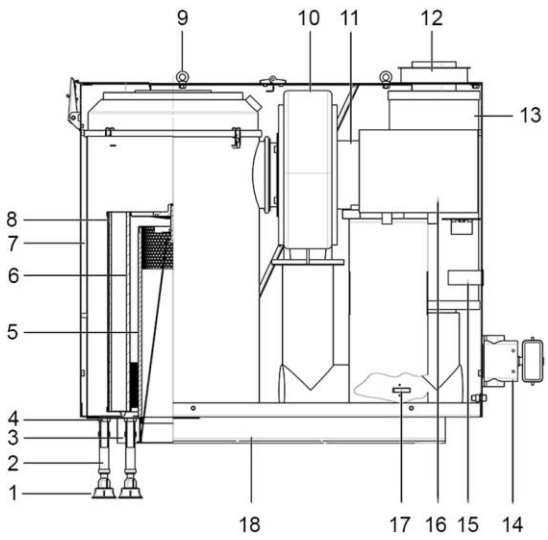
LGA 601 FU and FUW
The LGA 601 is a filtering separator with optional pre-separation (when FUW design).
It is driven by a frequency controlled motor. A volumetric flowrate sensor supplies the actual value required to obtain a constant volume flow of 600 m³/h. If this value falls below the setpoint, an electrical signal is output at approximately 450 m³/h. These signals can be evaluated to enable suitable maintenance action to be taken.

Installation in potentially explosive atmosphere (Zones 0, 1 and 2) is not permitted!

6. Order numbers

Type	Order number
LGA 601 FUW RAL 7035	72374902
LGA 601 FU RAL 7035	72410327

7. Modules/main components

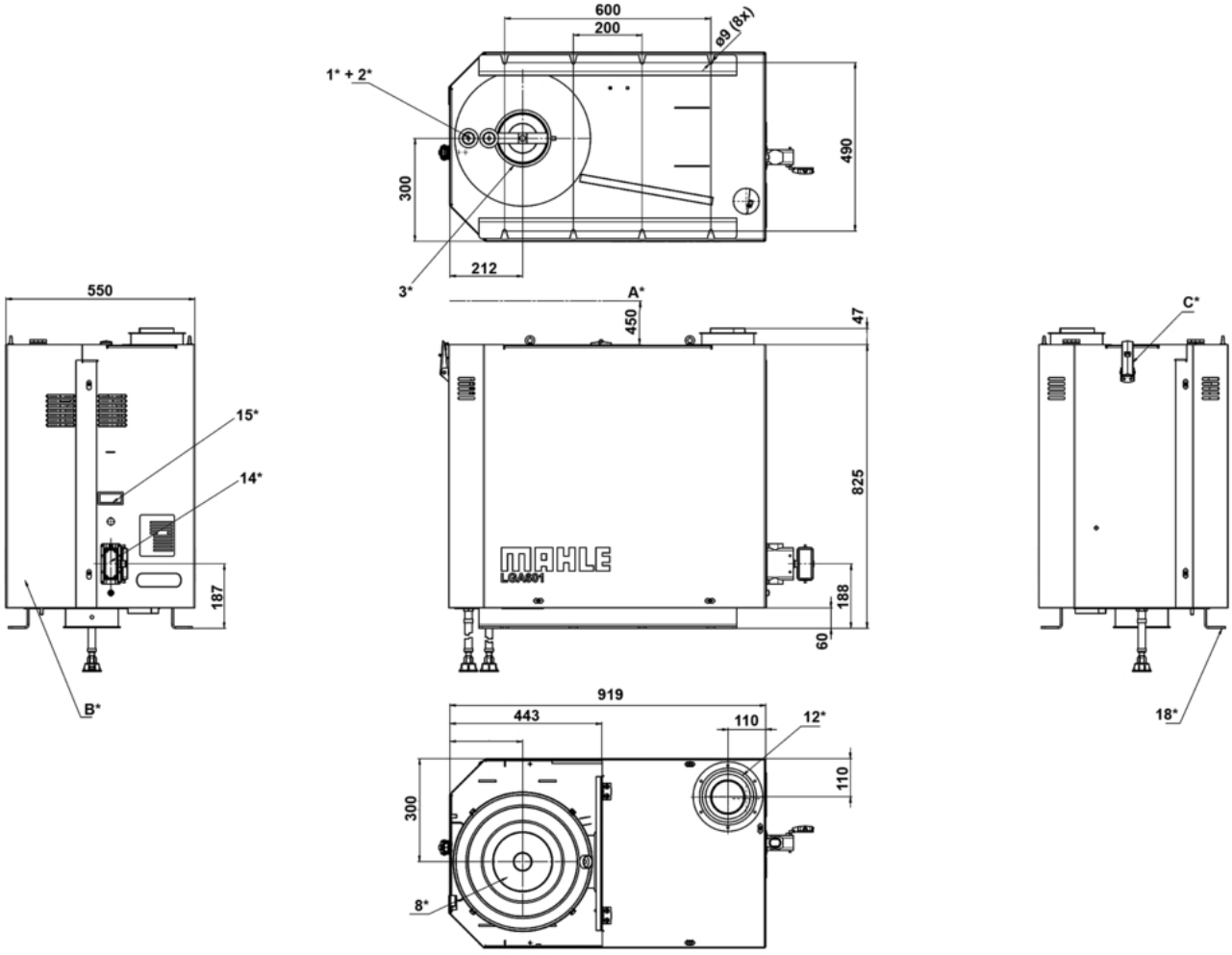


1	Membrane valve (FU 1x/FUW 2x)
2	Oil hose (FU 1x/FUW 2x)
3	Air inlet nozzle
4	Oil drain nozzle (FU 1x/FUW 2x)
5	Pre-separation element (only FUW)
6	Coalescer element
7	Housing
8	Filter housing
9	Eyebolt for transport
10	Fan with FU
11	Electric motor
12	Air outlet nozzle/Mounting fixture for HEPA filter
13	Silencer
14	Connection port
15	Volume flow display
16	Frequency converter
17	Volumetric flowrate sensor
18	Mounting base plate

8. Technical data

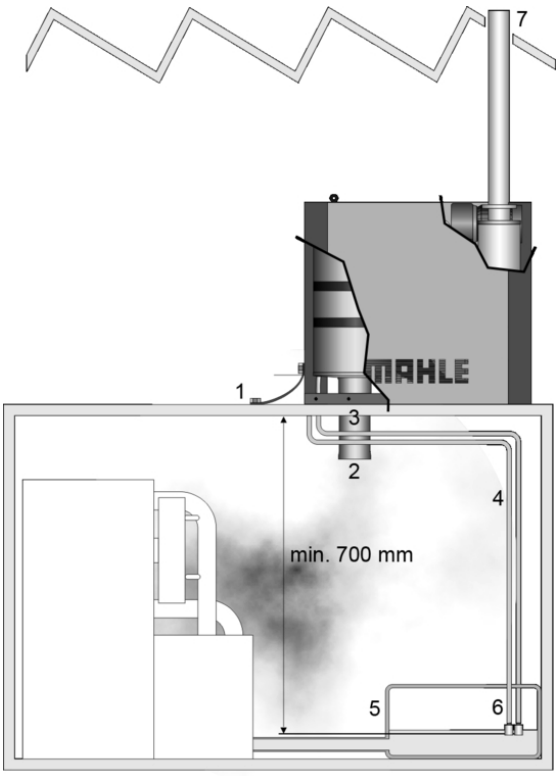
Volume flow	600 m³/h
Temperature range	+ 10 °C to + 60 °C
Air nozzles (2x Jacob)	150 mmm
Oil hose (2x)	PVC transparent 15x2 mm (5,5 m) - (FUW 2x)
Filter	1 coalescer element and 1 pre-separation element (only FUW)
Filter surface	4.8 m²
Dimensions (LxWxH)	919x550x825 mm
Weight	140 kg
Supply voltage	3 AC 400 V/PE, 50-60 Hz
Current consumption	3.3 A
Protection class electrical devices	IP54
Backup fuse	10 A
Connection port	Harting 10B
Motor output	1.5 kW
Motor speed	5920 U/min
Sound level	69 dB (A)

9. Dimensions



A*	Min. clearance required for filter element change
B*	Removable side panel
C*	Snap closure filter housing
1*	Membrane valve
2*	Oil hose
3*	Raw gas inlet connection DN 150
8*	Filter housing
12*	Clean gas outlet connection DN 150
14*	Connection port
15*	Volume flow display
18*	Mounting base plate

10. Installation



1 Equipotential bonding
2 Suction pipe
3 Raw air inlet nozzle
4 Oil hose (FUW 2x)
5 Oil storage reservoir
6 Membrane valve (FUW 2x)
7 Exhaust air pipe

Note the minimum clearance of 480 mm is required for element removal!

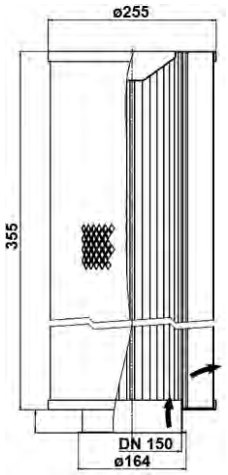
11. Spare parts

Order numbers for spare parts	
Designation	**Order number**
Pre-separation element(only LGA 601 FUW)	70515630
Coalescer element	79354390
Silencer	76326227
Oil hose	76326268
Membrane valve	78769697
Fixing nut for Coalescer element	76302996
Differential pressure transmitter	72404747
Volume flow display	70593410
Fixing nut for pre-separation element (only LGA 601 FUW)	76302996
Fan with frequency-controlled motor	72374884

12. Accessories and options

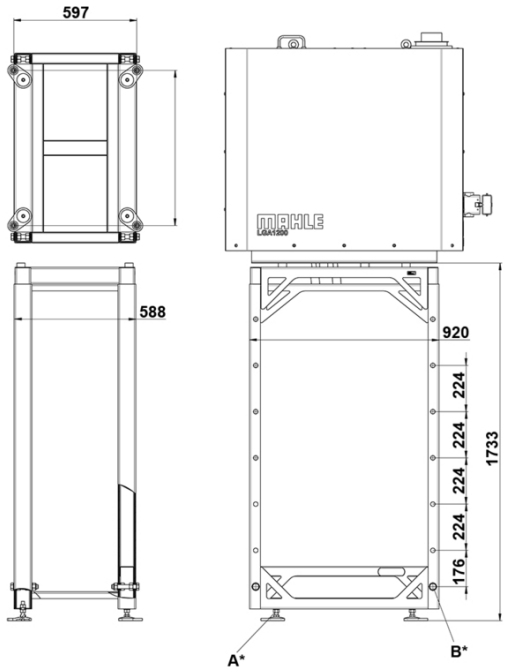
12.1 HEPA filter

For very high requested quality of cleaned air in recirculation mode, there is an option to add a HEPA filter downstream. Thanks to the outstanding separating performance of the LGA device, HEPA filter an reach a very long service life. HEPA downstream filters (class H13) are standardly available with filter surfaces about 3.5 m². Order number 72381952



12.2 Rack

For installation or mounting of the LGA-Gerätes beside a tooling machine. Order number 70539323



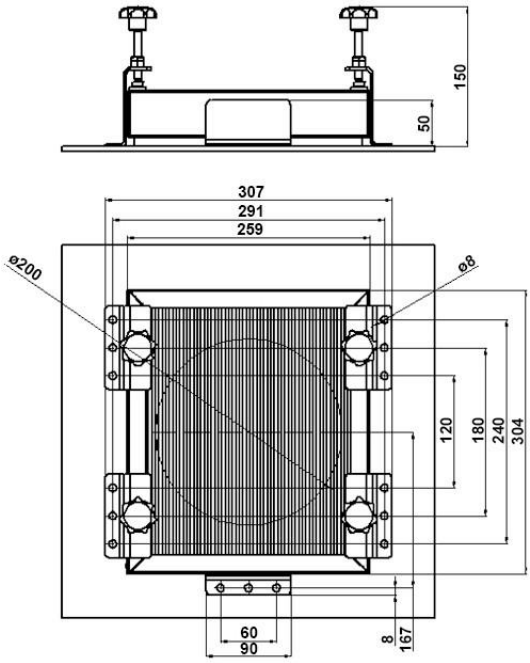
A* plate height adjustable
B* height adjustable grid

12.3 External preseparation with an impact separator (MIO filter plate)

Protects the prefilter and main filter installed in the unit from impurities such as entrained metal parts, dust particles or macro emulsions. MIO filter plates are cleanable coarse filters which can achieve class G4 (EN 779) depending on the inflow velocity.

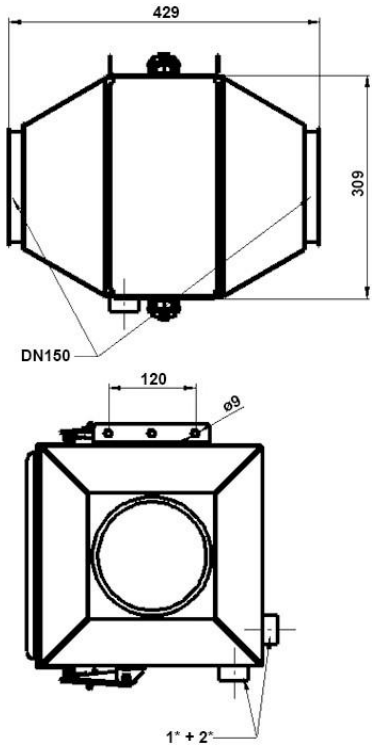
12.3.1 Installation in the tooling machine

The MIO filter plate (order number 70569965) can be installed into the tooling machine directly in front of the raw air inlet nozzle of the LGA 601 using the fixing set (order number 70571759).



12.3.2 Installation outside the tooling machine

The MIO filter plate (order number 70569965) can be installed outside the tooling machine in the sheet metal housing (order number 70579167) in front of the oil aerosol separator device.



1* Membrane valve
2* Oil hose

12.4 Tubing package

DN150 tubing package with a total lenght of approx. 5 meters includes two 90° bends, tube sections and clamps incl. seals. Order number 70549566

12.5 Keypad for frequency converter and display

Allows the volume flow (350 to 700 m³/h) to be optimally adapted to the operating conditions (must be installed by a qualified electrician or customer service). Energy efficiency is significantly improved as a result. Order number 72415282

13. Check list for aerosol separators

Customer data

Date

Company

Contact person | Function

Phone number | E-Mail

Adress

Information on the tooling machine

Manufacturer | Model | Year of construction

Type of processing ◯ Turning ◯ Milling ◯ Grinding ◯ Others

Machine housing ◯ None ◯ Partial housing ◯ Complete housing ◯ Other

Maschine utilization ◯ Single-shift ◯ Double-shift ◯ Three-shift

Processed material

Information on the cooling lubricant

Type of cooling lubricant ◯ Water-miscible (e.g. emulsion) ◯ Non water-miscible (e.g. oil)

Name according to safety data sheet

Minimal qantity lubrication (MQL) ◯ Yes ◯ No

Evacuation system and aerosol separator

If an aerosol separator is already in use:

Manufacturer | Model | Year of construction

Number and position of the evacuation points

Size of the evacuation ports ◯ DN 100 ◯ DN 150 ◯ DN 200 ◯ Others

Position of the separator ◯ On top of the machine ◯ Next to the machine

Exhaust air ◯ Recirculation in the hall ◯ Extraction to the outside

What else may be important:

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07/2019

Oil Mist Separator Unit
LGA 1200 FU/FUW

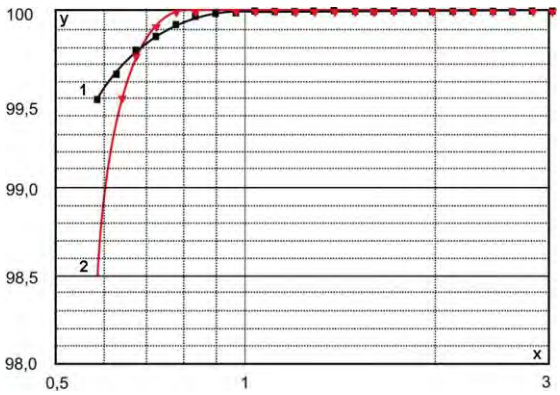
Nominal volume flow 1200 m³/h

1. Features

High performance oil mist separator unit for separation of coolant from tooling machine exhaust air

- Compact design
- High oil mist load capacity
- Excellent retention rates
- Quality filters, easy to service
- Service reduced and energy-saving system
- Equipped with high-efficient coalescer elements
- High dirt holding and optimized service life
- Modular design for direct installation of main components onto tooling machines
- Pre-separation system for optimized service life
- Optional backfitting with a HEPA filter (H13) for more efficiency
- Recirculating or exit air operation available
- Worldwide distribution

2. Fractional collection efficiency

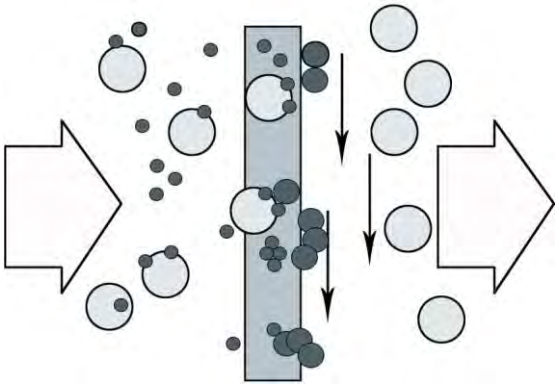


x = Particle size in µm
y = Fractional retention rate in %

Aerosol: Wiolan SH 10
Raw gas concentration: 50 mg/m³
Volume flow: 600 m³/h

1 = Filter cartridge as delivered
2 = Filter cartridge after 100 operating hours

3. Operating principle



Oil aerosols are sucked away from the machining space of machine tools. The oil-laden air flows outward through the coalescer element from the inside. The oil attaches itself to the fibre media as it passes through the filter. Minute oil droplets "coalesce" to form larger drops. These larger droplets migrate downwards on the coalescer element due to gravity. The oil accumulates at the bottom of the housing and is returned to the cooling lubricant storage reservoir via the oil drain hose and the membrane valve. The vacuum in the filter housing causes external air to be sealed off by the membrane valve. The valve opens automatically when the oil in the drain hose reaches a height of at least 500 mm. The cleaned airflow is sucked away by means of a high-pressure fan and blown out at the top through a silencer.

4. Application

Suitable for non-water-miscible cooling lubricants (cutting oil, grinding oil, drilling oil) and oil aerosol exhausted by machine tools and also for water-miscible cooling lubricants.

Operating limits

If oil is used as cooling lubricant for machining processes, air usually has to be sucked away from the working area to prevent the atomized oil from dispersing. The concentrations that often occur in the cooling lubricant jet or in the machine room could result in ignition in case of tool breakage, for example. If the machining process involves flammable cooling lubricants or flammable materials, safe operation must be ensured by providing suitable fire and explosion protection devices in conformance with statutory regulations.

5. Product information

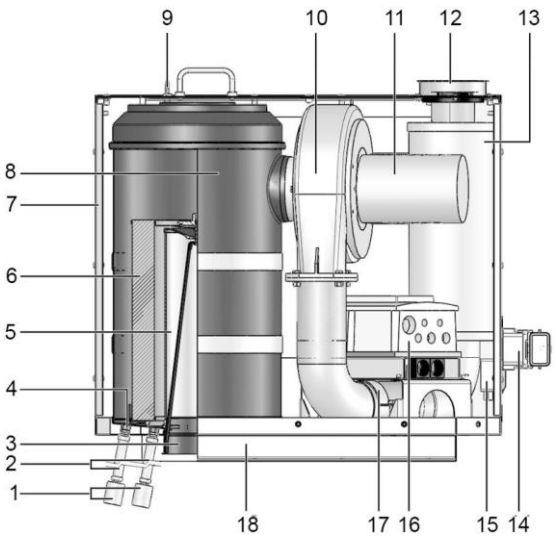
LGA 1200 FU and FUW
The LGA 1200 is a filtering separator with optional pre-separation in FUW version.
It is driven by a frequency controlled motor. A volumetric flowrate sensor supplies the actual value required to obtain a constant volume flow of 1200 m³/h. If this value falls below the setpoint, an electrical signal is output at approximately 900 m³/h. These signals can be evaluated to enable suitable maintenance action to be taken.

Installation in potentially explosive atmosphere (Zones 0, 1 and 2) is not permitted!

6. Order numbers

Type	Order number
LGA 1200 FU RAL7035	70526210
LGA 1200 FUW RAL7035	70386720

7. Modules/main components

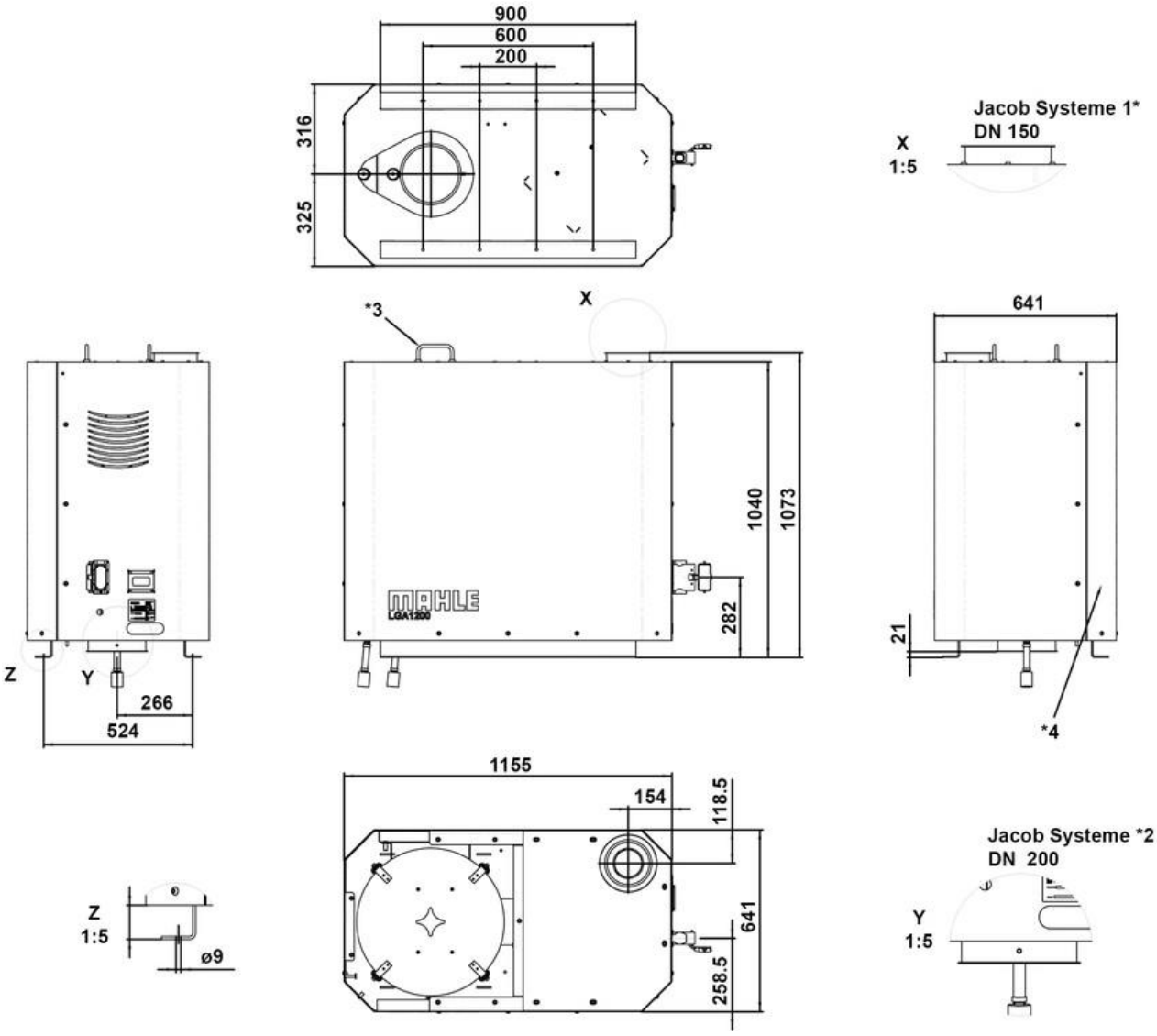


1	Membrane valve (FU 1x/FUW 2x)
2	Oil hose (FU 1x/FUW 2x)
3	Air inlet nozzle
4	Oil drain nozzle (FU 1x/FUW 2x)
5	Pre-separation element (only FUW)
6	Coalescer element
7	Housing
8	Filter housing
9	Eyebolt for transport
10	Fan
11	Electric motor
12	Air outlet nozzle/base for HEPA filter
13	Silencer
14	Connection port
15	Volume flow display
16	Frequency converter
17	Volumetric flowrate sensor
18	Mounting base plate

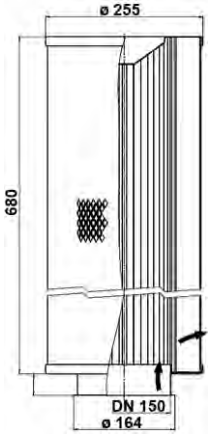
8. Technical data

Volume flow	1200 m³/h
Temperature range	+ 10 °C to + 80 °C
Air nozzles (2x Jacob)	200 mm/150 mm
Oil hose (2x)	PVC transparent 15x2 mm (5 m) (FUW 2x)
Filter	1 pre-separation element and 1 coalescer element (FU) 1 pre-separation element and 2 coalescer elements (FUW)
Filter surface	9.5 m²
Dimensions (LxWxH)	1155x641x1073 mm
Weight	237 kg
Supply voltage	3 AC 400 V/PE, 50-60 Hz
Current consumption	9.5 A
Protection class electrical devices	IP54
Backup fuse	16 A
Connection port	Harting 10B
Motor output	4 kW
Motor speed	6190 U/min
Sound level	72 dB (A)

9. Dimensions

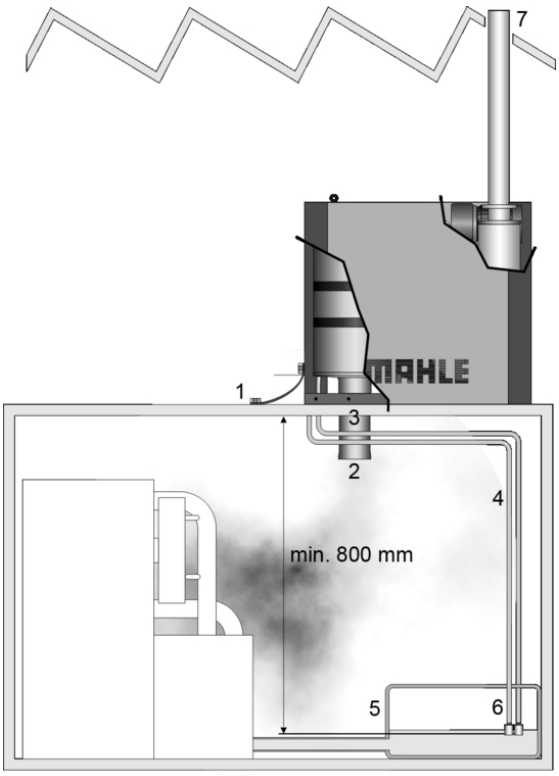


*1 Air outlet nozzle
*2 Air inlet nozzle
*3 Cover removable for changing element
*4 Side cover removable



HEPA filter (H13)
(further versions upon request)
Minimum clearance required 150 mm

10. Installation



1 Equipotential bonding
2 Suction pipe
3 Air inlet nozzle
4 Oil hose (2x)
5 Oil storage reservoir
6 Membrane valve (2x)
7 Exhaust air pipe

Note the minimum clearance of 480 mm is required for element removal!

11. Spare parts and accessories

Order numbers for spare parts and accessories	
Designation	**Order number**
Pre-separation element	70518319
Coalescer element (2x)	70373631
HEPA after-filter	72381953
Membrane valve *	78769697
Harting easy hood (19 30 010 1540)	70360184
Harting bush insert (09 33 010 2716)	70345233
Jacob pipe nozzle (11151431)	70346551
Jacob clamp ring (12152903)	79389081
Jacob NBR flanged sealing ring (10156951)	76141121
Jacob 90° bend (11151339)	70365712
Fan	70516277
Frequency converter	70514173
Volumetric flowrate display	70385600
Electrical plug connection	72374158
Oil hose 5 m *	70595658
Element sealing O-Ring	70378616
Element housing flanged sealing ring	70576597

* For FUW version are 2 elements needed

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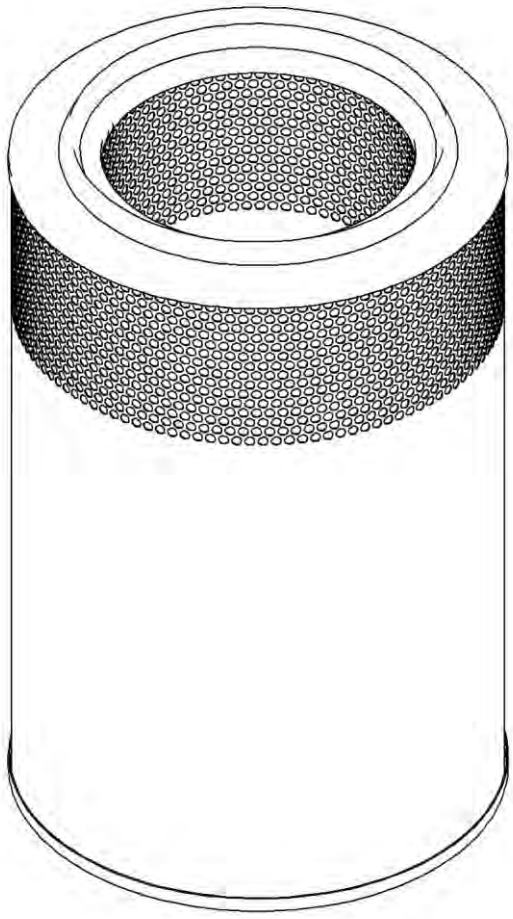
70517226.06/2019

Filter element
Oil separator element for oil separator devices

1. Features

High performance aerosol separator element for separation of coolant from tooling machine exhaust air



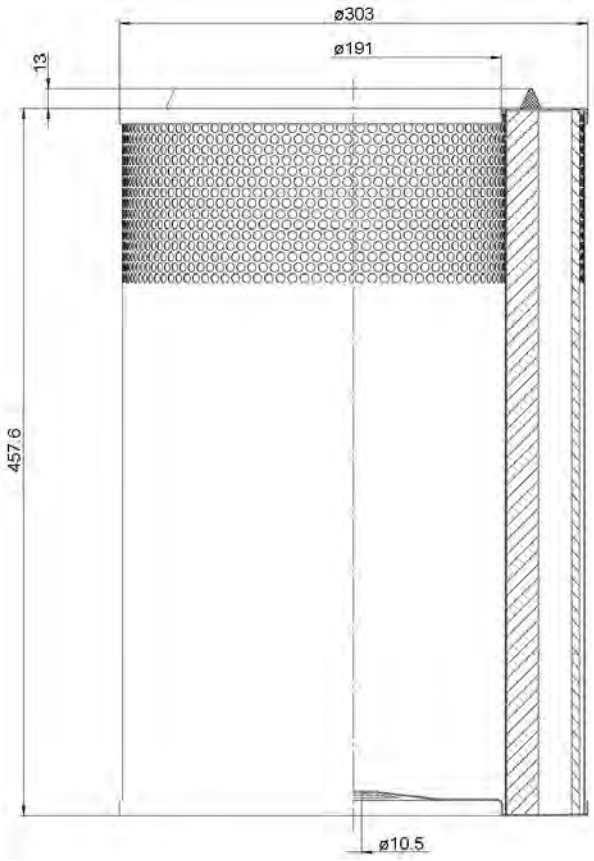
3. Fractional collection efficiency

x = Particle size [µm]
y = Fractional retention rate [%]

Aerosol: Wiolan SH 10
Raw gas concentration: 50 mg/m³
Volume flow: 600 m³/h

1 = Filter cartridge as delivered
2 = Filter cartridge after 100 operating hours

4. Dimensions



5. Application

Suitable for non-water-miscible cooling lubricants (cutting oil, grinding oil, drilling oil) and oil aerosol exhausted by machine tools and also for water-miscible cooling lubricants.

6. Technical data

Volume flow	600 m³/h
	Δp 40 mbar at 600 m³/h at the operating point
Temperature range	+ 10 °C up to + 60 °C
Filter surface	46000 cm²

7. Order numbers

Order numbers for spare parts	
Designation	**Order number**
Coalescer element	79354390
Fixing nut for Coalescer element	76302996

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LEASING already at 125 € per month

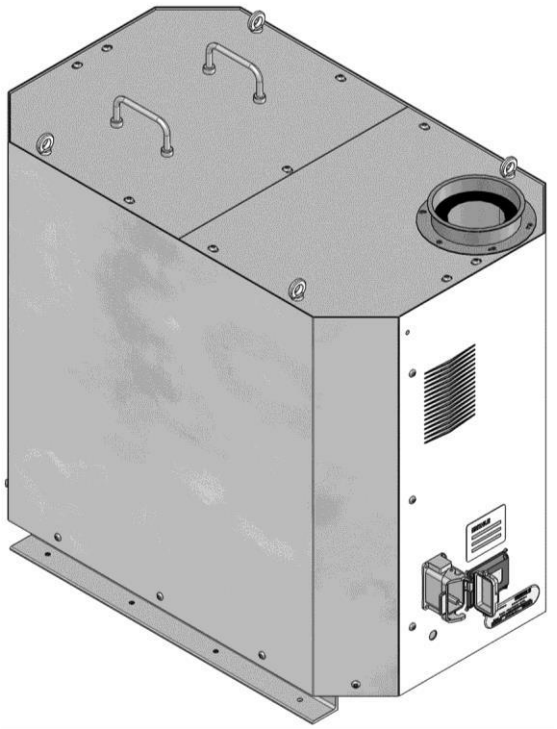
Oil mist separation
LGA Series 600, 1200 und 2400 FUW

for direct suction from tooling machine

Features

High performance oil mist separator unit for separation of coolant from tooling machine exhaust air

- High reliability
- Very low maintenance costs
- Low maintenance equipment
- High economic efficiency
- Low operating costs
- Service life up to two years possible
- Complies the labour-safety regulation „ASV”



Application examples

Further MAHLE products for tooling machine

Suction filter for dry tooling application

Automatic filter for cooling lubricants

Mechanical emulsion breaker

Screen basket filter

Fluid filters and elements

Further information or product sheets requested?

Name: _____

Phone: _____

Fax: _____

Email: _____

Theme: _____

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Germany

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