



Auto M-Z Filter

Metal • Cement • Bulk Powder • Plastic
Pharmaceutical • Wood • Shotblast • Food • Silo Venting

Auto M-Z Filter Feature

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Pharmaceutical • Wood • Shotblast • Food • Silo Venting**



1000 - 11,500 m³/h

Description

The Auto M-Z series is a robust, free standing filter range with an automatic shaker cleaning system. It is the latest model based upon over thirty years of continuous production experience. It is designed for intermittent use, where the filter can stop occasionally for cleaning off line.

Advantages

- All access for maintenance from the front of the unit
- Dust bin with quick release mechanism
- Compressed air not required
- ATEX certified for explosion dusts in categories St1, St2 and St3

- Efficient, automatic, electric motor driven shaker mechanism
- Neat appearance suitable for commercial and educational applications
- Weather proof for location anywhere

Technical Parameters:

- Maximum working temperature 80°C
- Maximum negative pressure 4000 Pa
- Maximum positive pressure 1500 Pa
- Filter areas from 7.5 to 90 m²
- Wide range of filter materials to suit most applications
- Integral, high efficiency fan range from 0.75 kW to 15 kW
- Versatile inlet connections including QF-type ducting
- All electrical connections pre-wired to terminal box on unit

Options:

- Bin balance kit available to enable plastic bin-liners to be used
- Pre-separation section for bulky or fibrous dusts
- Sack tipping unit with hinged door at front
- Spark trap on inlet
- Open base venting unit with or without fan assistance
- Built in secondary filters typically F7 or H14

Accessories:

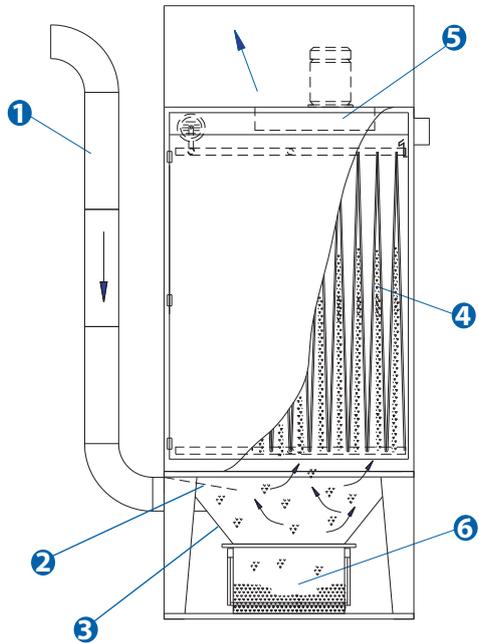
- Air silencers with top or side discharge
- Weather cowl for silencer
- Fan-shaker controllers
- Explosion panel alarm switch
- Differential pressure switch or indicator

Technical parameters				
Type	Filter area [m ²]	Typical maximum air flow volume [m ³ /h]	Max.Fan [kW]	Weight [kg]
Z7.5	7.5	800	3	210
Z15	15	1900	3	250
Z25	25	3000	7.5 (small)	385
Z30	30	3400	7.5 (small)	425
Z50	50	6000	15	655
Z60	60	6800	15	755
Z75	75	9000	15	900
Z90	90	10200	15	1035

How It Works

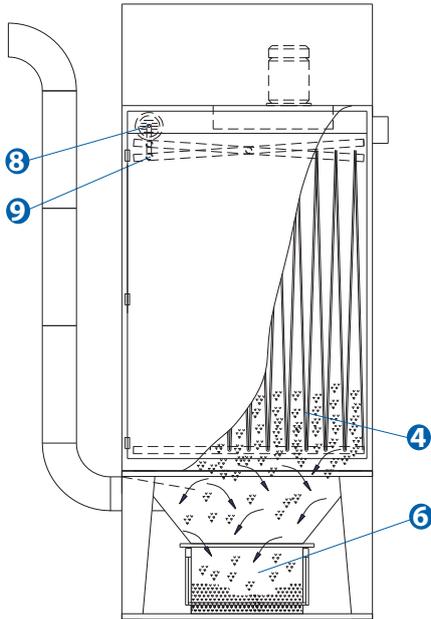
...during normal operation

1. During normal operation, the dust laden air from the plant travels down the extract duct ①
2. A standard baffle ② is mounted at the inlet of the filter to break up the air flow and direct the dust downward into the hopper section ③ while protecting the filter media from abrasive dusts.
3. The lighter dust collects on the inside of the filter bag ④ as clean air passes through. Finally, the clean air travels up through the air handling fan ⑤ where it could be returned to the plant or exhausted outdoors.
4. The heavier dust settles in the hopper section ③ where it is discharged into a metal bin ⑥.



...while cleaning

1. Each time the filter unit is turned off, there is a 2 minute delay and then the automatic timer activates the shaking motor ⑧.
NOTE: The cleaning cycle is set to 8 seconds.
2. The shaft of the shaker motor is attached to a simple cam which, in turn is attached to the shaking mechanism ⑨. The shaking mechanism pivots vigorously which causes the dust to break free from the inside of the filter bag ④.
3. The dust then falls into the quick-release metal collection bin located at the bottom of the filter unit ⑥.



Reference: Air Pollution Control Solution



Rubber Industry, **Thailand**



Composite Industry, **Australia**



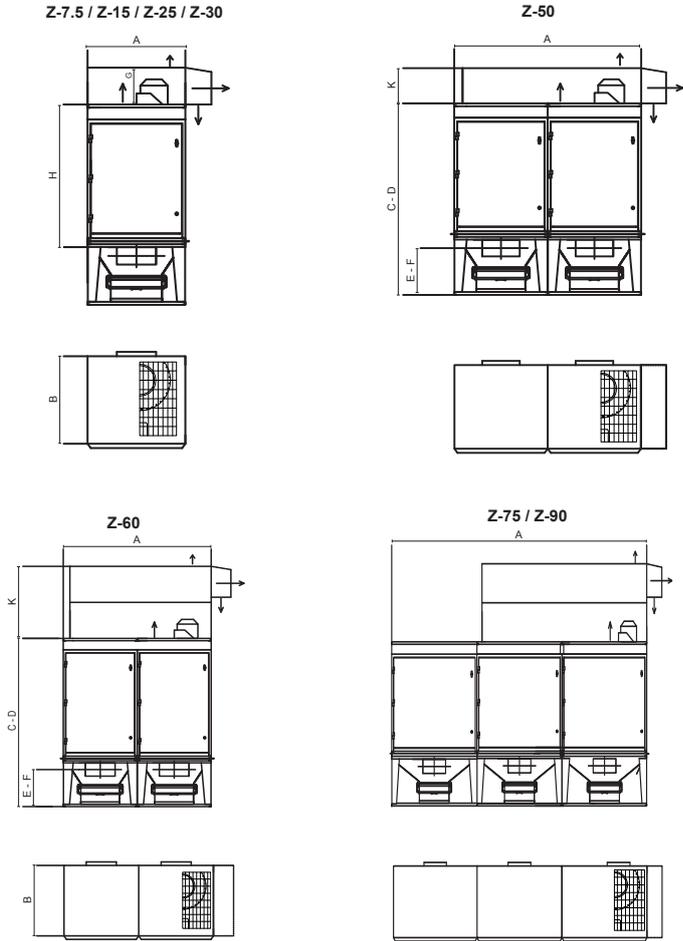
Printing Industry, **Japan**

Industry Reference:

- | | |
|-------------------|-------------|
| Aluminium | Agriculture |
| Casting | Cement |
| Chemicals | Electronics |
| Food processing | Foundry |
| Metal & Casting | Machinery |
| Packaging | Painting |
| Paper | Plastic |
| Pharmaceutical | Rubber |
| Shot blast | Steel |
| Tobacco | Wood |
| ... and many more | |

Auto M-Z Filter

Dimensions



Air outlet option 1 :
On the top

Air outlet option 2 :
On the side with wire mesh

Air outlet option 3 :
On the side with weather hood

Standard Inlets on rear for Z 7.5 to Z 30 units. Inlet at rear optional. Standard inlets at rear for Z 50 to Z 90 units. Side inlets optional on Z 50 and Z 60 units. Z 90 must have rear inlets.

Leading dimensions in mm - Standard Auto M-Z units											Max.weight kg	
Type	A	B	C	D	E	F	G	H	K	Inlet	Unit with bin and largest single fan	Venting unit
	Width excluding terminal box	Depth	Filter height with 75 litre bin	Filter height with 150 litre bin	Height to c/l of inlet, 75 litre bin	Height to c/l of inlet, 150 litre bin	Height of max. size motor for unit	Vent filter with mounting flange	Height of standard silencer	Dimensions		
Z 7.5	830	750	1458	1753	485	783	245	911	425**	Ø 100, 125 150 and 190	210	150
Z 15	830	750	2008	2303	485	783	245	1461	425**	Ø 100, 125 150 and 190	250	190
Z 25	1120	1010	2313	2613	565	865	366	1680	425	450×200(H)	385	270
Z 30	1120	1010	2567	2867	565	865	366	1937	425	450×200(H)	425	310
Z 50	2240	1010	2313	2613	565	865	844*	1680	425	450×200(H)	655	460
Z 60	2240	1010	2567	2867	565	865	844*	1937	1100	450×200(H)	755	560
Z 75	3360	1010	2313	2613	565	865	844*	1680	1100	450×200(H)	900	595
Z 90	3360	1010	2567	2867	565	865	844*	1937	1100	450×200(H)	1035	730

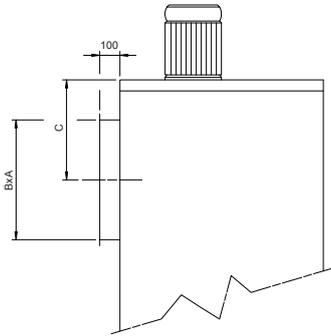
*NOTE: shown for 11 kW and 15 kW fans which are externally mounted. Dimension for 7.5 kW motor is 366.

**NOTE: max. fan size for Z 7.5 and Z 15 is 3.0 kW.

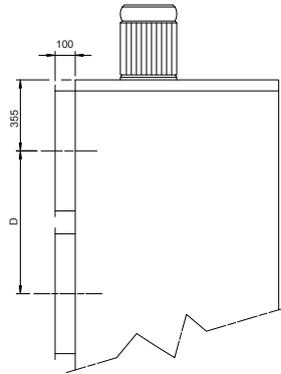
Dimensions in mm.

Explosion Relief Panels

SINGLE PANEL LOCATION



DOUBLE PANEL LOCATION



ATEX Certified
Ex II D, under n°
BASEEFA 03 ATEX 0225

Dimensions mm					
Panel type	A	B	C		D
			Z-25	Other sizes	
H1	630	600	600	500	800
H2	1000	600	600	500	800
H3	1000	880	740	640	910

* On units with double panels, the upper panel is always H1 or H2. 25 units only:

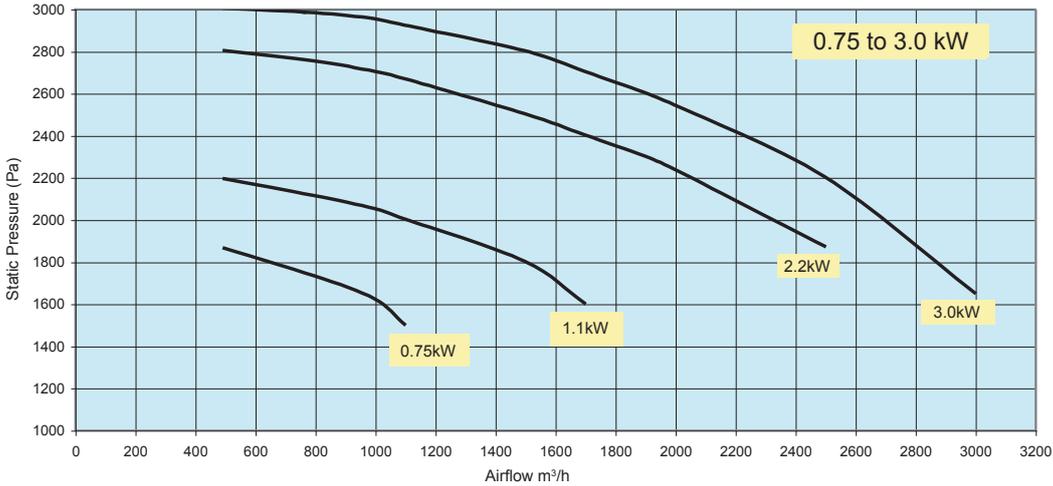
** For Z 7.5 and Z 15 units only C=500

Dust explosion class				
Unit configuration	Unit size	St1	St2	St3
Units with 75 or 150 litre bins	Z - 7.5	1 - Type H1	1 - Type H1	2 - Type H1
	Z - 15	1 - Type H1	2 - Type H1	2 - Type H1
	Z - 25	1 - Type H2	1 - Type H2	1 - Type H3
	Z - 30	1 - Type H2	1 - Type H3	2 - Type H2
	Z - 50	2 - Type H2	2 - Type H2	2 - Type H3
	Z - 60	2 - Type H2	2 - Type H3	4 - Type H2
	Z - 75	3 - Type H2	3 - Type H2	3 - Type H3
	Z - 90	3 - Type H2	3 - Type H3	6 - Type H2
Units with 75 or 150 litre bins and pre-separation section or spark trap	Z - 7.5	1 - Type H1	1 - Type H1	2 - Type H1
	Z - 15	1 - Type H1	2 - Type H1	2 - Type H1
	Z - 25	1 - Type H2	1 - Type H3	2 - Type H2
	Z - 30	1 - Type H2	1 - Type H3	2 - Type H2
	Z - 50	2 - Type H2	2 - Type H3	4 - Type H2
	Z - 60	2 - Type H2	2 - Type H3	4 - Type H2
	Z - 75	3 - Type H2	3 - Type H3	6 - Type H2
	Z - 90	3 - Type H2	3 - Type H3	6 - Type H2
Venting Unit	Z - 7.5	1 - Type H1	1 - Type H1	2 - Type H1
	Z - 15	1 - Type H1	2 - Type H1	2 - Type H1
	Z - 25	1 - Type H1	1 - Type H2	1 - Type H3
	Z - 30	1 - Type H2	1 - Type H2	1 - Type H3
	Z - 50	2 - Type H1	2 - Type H2	2 - Type H3
	Z - 60	2 - Type H2	2 - Type H2	3 - Type H3
	Z - 75	3 - Type H1	3 - Type H2	3 - Type H3
	Z - 90	3 - Type H2	3 - Type H2	3 - Type H3

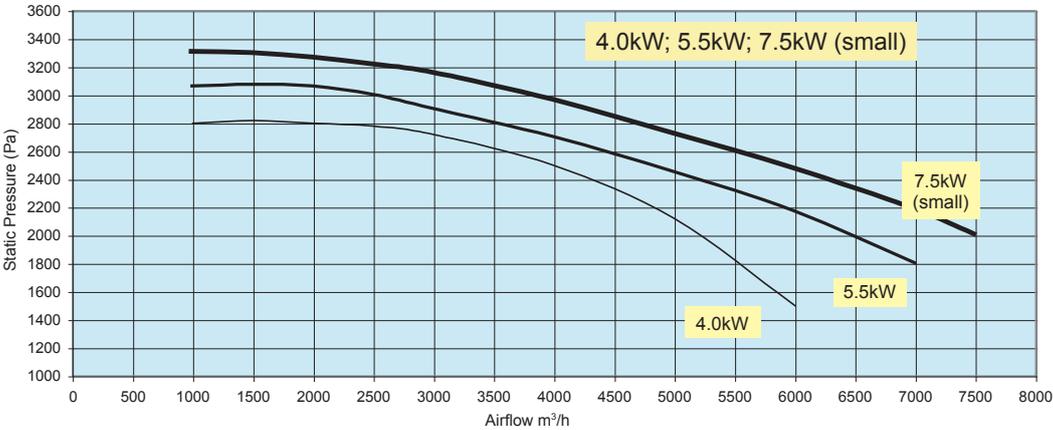
Auto M-Z Filter

Fan Performance

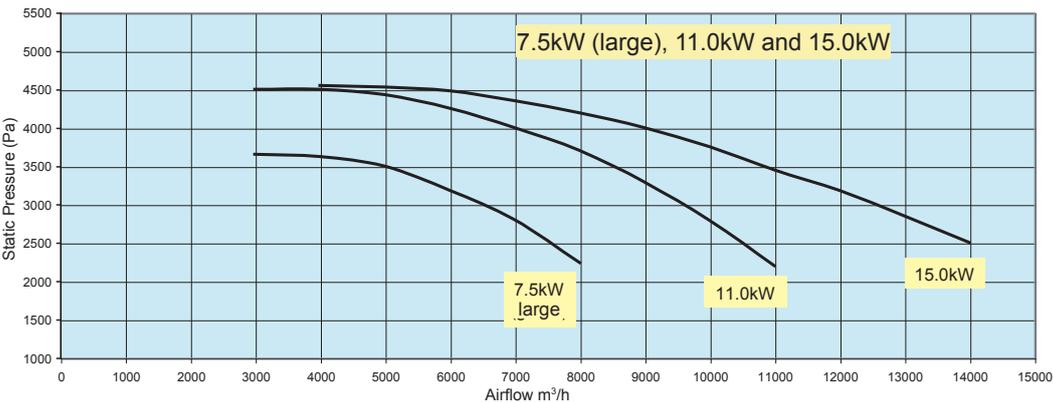
Fan performance, with open outlet, at running speed 2900 Rpm.
Integral fan used on AUTO M-Z.



Fan performance, with open outlet, at running speed 2900 Rpm.
Integral fan used on AUTO M-Z.



Fan performance, with open outlet, at running speed 2900 Rpm.
Integral fan used on AUTO M-Z.



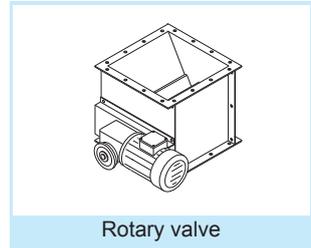
Options

Pre-separation section

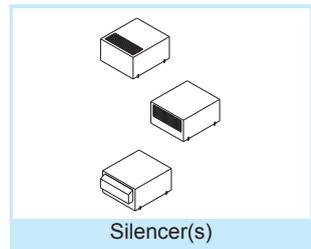


This section fits between the hopper and is delivered as an integral part of the hopper. The inlet may incorporate a spark trap if specified.

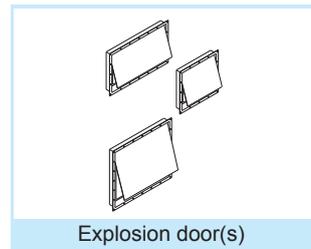
A pre-separation section is beneficial for lightweight dusts, and higher dust loadings, as it provides a greater volume below the filter bag. The pre-separation section increases the total unit height by 390 mm for Z7.5 and Z15 units; by 500 mm for all other units.



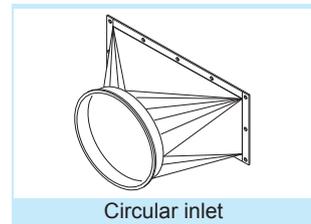
Rotary valve



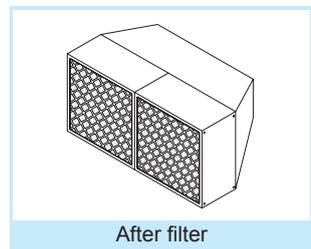
Silencer(s)



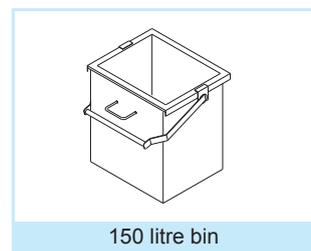
Explosion door(s)



Circular inlet



After filter



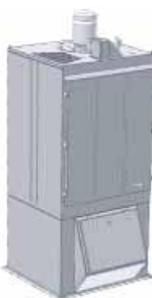
150 litre bin

Bin-balance



The bin-balance device balances the pressure between the bin and the clean air section. It enables plastic bin liners to be used to aid the clean disposal of waste. The flexible connecting tube is long enough to enable complete withdrawal of the bin.

Sack tipping unit



This replaces the hopper and is normally mounted over a product hopper that is hand filled. When the hinged door is opened, to empty the contents of a sack, a switch starts the filter fan. When closed again, the fan stops and the cleaning cycle operates after a short delay.

Flange sizes are the same as for Z7.5, Z15, Z25 and Z30 venting units.

Venting unit



This unit has no hopper, but is mounted directly onto the vessel or silo to be ventilated. It is fitted with a mounting flange (not shown in illustration, but sizes detailed below). It may be fan-assisted, as shown, or without fan. In this case the clean air outlet is at the back, with a weather cowl. The fan assisted version should be fitted with a standard silencer and weather cowl for outdoor location. The shaker motor, shown here in optional externally mounted position, is normally located inside the filter body.



FACTS ABOUT NEDERMAN

The Nederman Group is one of the world's leading suppliers of products and solutions within the environmental technology sector, focusing on industrial air filtration and recycling.

Nederman products and solutions contribute to reducing environmental impacts from industrial production and to creating safe and clean working environments whilst boosting production efficiency.

The group's offering covers everything from the design stage through to installation, commissioning and servicing. Nederman has subsidiaries in 29 countries and agents and distributors in over 30 countries.

Nederman is ISO 9001 and 14001 certified. The group develops and produces in its own manufacturing and assembly units in Europe, North America and Asia.

In 2010 Nederman acquired Dantherm Filtration, thereby forming the world's leading group within industrial air filtration.

Nederman

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