

Cyklotec cyclone filter

Effective grease filter for professional kitchens.

- › Separates all particles larger than 7 μm
- › Filters effectively, even at variable flow rates
- › Constant pressure drop always yields the correct exhaust air flow
- › No moving parts or electrical motors
- › Reduced risk of fire and simplified cleaning of duct system



Description

The Cyklotec cyclone filter consists of a filter housing with damper, pressure tap and a number of filter cassettes. Each cassette contains ten cyclones (spiral-shaped cylinders).

Cyklotec achieves a uniquely high level of grease separation, even at variable air flow rates. The efficient filtration process minimises the risk of fire and reduces maintenance of duct systems. The filter's design prevents clogging and thus always guarantees the correct exhaust air flow.

Since each filter cassette functions within a broad flow rate range, the kitchen's filtration requirements are normally met with just a few cassettes. The cassettes can easily be removed and cleaned in a dishwasher.



Function

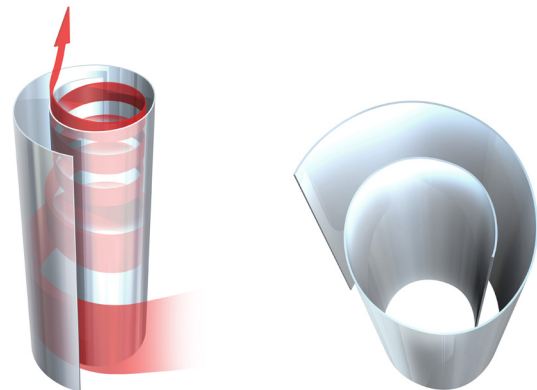
The exhaust air rate in the cyclone determines how effectively the separation of particles occurs. Higher rates make for more effective separation but also a larger pressure drop.

In the range of 20-90 Pa, the cyclone filter works effectively with low noise levels. Cyklotec separates all particles larger than 7 μm at the recommended flow rate and 9 μm at half flow.

Cyklotec can therefore be used with a retained level of particle separation in kitchens where fans are used at both full and half speed.

Proposal for description text

Cyklotec cyclone filter with 100% separation of particles; 7 μm at recommended flow and 9 μm at half flow.

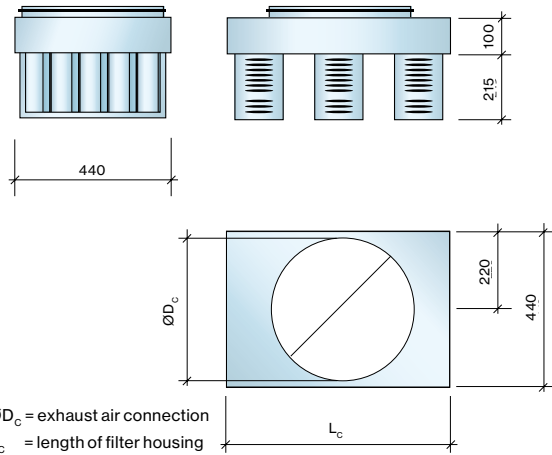


1. Air containing grease flows into the cyclone
2. When the air circulates at a great speed in the cyclone, the grease and particles are hurled against the walls of the cyclone due to the centrifugal forces exerted
3. Grease and grime drip down the walls to the filter's collection vessel
4. The filtered air flows out of the cyclone filter and is transported into the exhaust air duct

The Cyklotec's filter cylinder has a unique spiral design that creates an accelerated air speed. The aerodynamic design provides much higher air speeds, even at low air flow rates. This is the secret behind Cyklotec's superior performance.

Design

Filter housing in brushed stainless steel sheet metal.
 Sleeve coupling connection with damper. Pressure tap.
 Filter cassette in stainless steel sheet metal.
 Filter cassettes can be replaced with a piece of blank sheet metal.



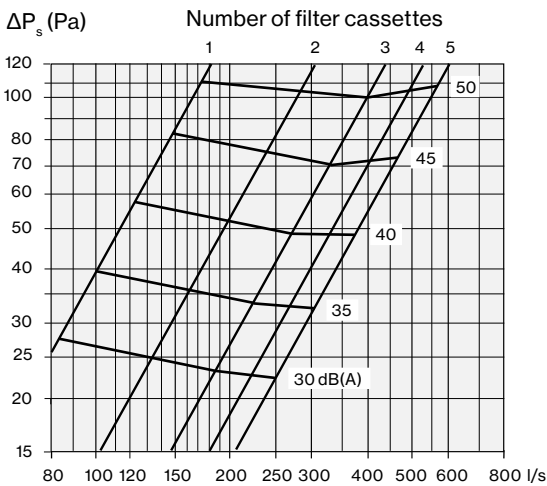
Exhaust air

The number of filter cassettes in the Cyklotec cyclone filter is determined by the exhaust air flow. For effective separation, a pressure drop of at least 20 Pa across the Cyklotec filter is recommended, which corresponds to the lower exhaust air flow rate in the table below. At the higher air flow, the pressure drop is 80-90 Pa.

Exhaust air l/s	Number of filter cassettes	ØD _c mm	L _c mm
60 - 150	1	250	295
120 - 250	2	315	400
170 - 340	3	400	620
215 - 430	4	400	840
250 - 520	5	400	1060

Air flow - Pressure drop - Noise level

Reported dB(A) values apply at 10 m² Sabine, which corresponds to a room attenuation of 4 dB.



Sound power level

The sound power level L_w (dB) divided into octave bands, is obtained by adding the following correction K_w to the noise level in question.

Tabell K_w - exhaust air

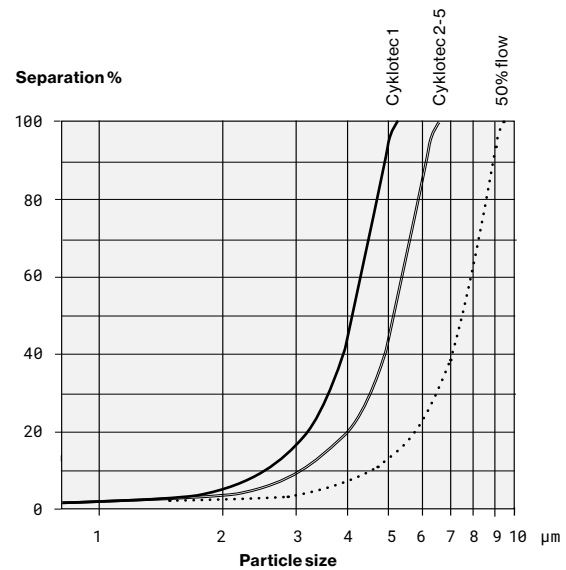
UV Safe	Frequency, Hz							
	63	125	250	500	1K	2K	4K	8K
	7	6	5	4	-4	-9	-15	-29

Particle collection efficiency

The efficiency of the filter has been measured by a certified test institute according to standard VDI 2052.

The diagram shows the filter's particle collection efficiency at the recommended level (80 Pa) and half flow (20 Pa).

It can be noted that, even at half flow, all particles > 9 μm are separated.



Sound attenuation

Reported sound attenuation ΔL (dB) relates to the total sound reduction between the duct and room including end reflection.

Tabell ΔL (dB) - exhaust air

Number of filter cassettes	Frequency, Hz							
	63	125	250	500	1K	2K	4K	8K
1	20	15	9	5	3	3	2	2
2	17	12	7	3	3	3	2	3
3	15	10	6	3	2	2	1	2
4	14	9	5	2	2	1	0	1
5	13	8	4	2	1	1	1	0

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