



Complete and space-saving "Plug & Play" compressed-air cleaned filter unit with integrated fan to be used for air filtration from processes that form limited dust volumes (welding, cutting, grinding and similar).

Can be placed in the production room and filters extraction from up to 7 simultaneous welding places.

FL: Air volume: Up to 8,200m³/h
 Vacuum: Up to 5,000Pa
 Filter area: 26 - 168m²

Description filter unit

- Polluted air is led in through the lowest connection on unit side, wherein preseparator is integrated.
- Air is filtered through vertical-placed filter cartridge with internal filter core, which optimizes cleaning effect.
- Differential pressure controlled cleaning of filter cartridges through integrated compressed-air system incl. automatic after-cleaning for optimized regeneration of filter cartridges.
- Clean air is led out through connection in unit side.
- Dust is collected in dust container in unit bottom. Dust container mounted in Gram Quicklock-adjustable dust container suspension.

Description fan

Unit is above equipped with a fan type VE or RV, 3x400 VAC, 50 Hz, 2800 rpm. Both fans are equipped with closed fan wheel with backward-curved straight self-cleaning blades, static/dynamic balanced according to ISO 14694 (BV3 G 6.3). Fan delivers air in fan enclosure, where air noise is dampen by sound absorbing material, before it is led out through bolted-on connection.

Simple mounting, connection and operation

Unit delivered ready for use. Equipped with fork pockets and crane lifting points for easy transport and installation. Integrated motor starter and CEE-plug on front make connection quick and easy. Unit is also available for operation with external frequency converter. In that case motor is delivered with built-in thermo sensor. Compressed-air supply is connected on unit by Cejn-coupling incl. ø10mm hose nipple. Easily accessible differential pressure reading in digital display of filter control placed countersunk on unit front. Quicklock-adjustable dust container on 4 wheels ensures user-friendly dust container service.

Can be used for room ventilation/air cleaning and is available with W3-certificate

For cleaning of slightly polluted room air containing e.g. welding smoke Filterline FL52 and FL 104 can be delivered with mounted air distribution modules that effects extraction of polluted air in top and returning clean filtered air at floor level (recirculation). Filterline units with/without selected Airtower modules (PFL) are available with W3-certificate.



Automatic and compressed-air

Filter- and motor control supplied by CEE-plug on front. 5.5-6.0 bar dry compressed-air is connected by Cejn-coupling incl. ø10mm hose nipple.



Dust container

Quicklock-dust container system with 35L or 57L-dust container is placed behind bottom front door.



Easy filter replacement with limited dust generation

Cartridge replacement is performed by bayonet suspension, which is loosened from clean air chamber and inserted into sack.



Connections

Air is sucked in by lower connection and leaves unit by upper connection. Inlet connection can be mounted right/left.

- Filters:**
- Filter cartridge ø325mm. Length: 660/1320mm
- Filter control:**
- Differential pressure control type ECO-S with automatic after-cleaning. 230V AC (constant)
 - Compressed-air: 5.5 - 6.0 bar dry compressed-air by cejn-coupling incl. ø10mm hose nipple
 - Differential pressure can be seen in digital display, placed countersunk on front
 - 1"-jet valves connected to central compressed-air tank in clean air chamber
- Filter change:** Cartridge replacement made easily and dust-reduced by filter bayonet suspension that is loosened from clean air chamber and inserted into sack. Access by front door.

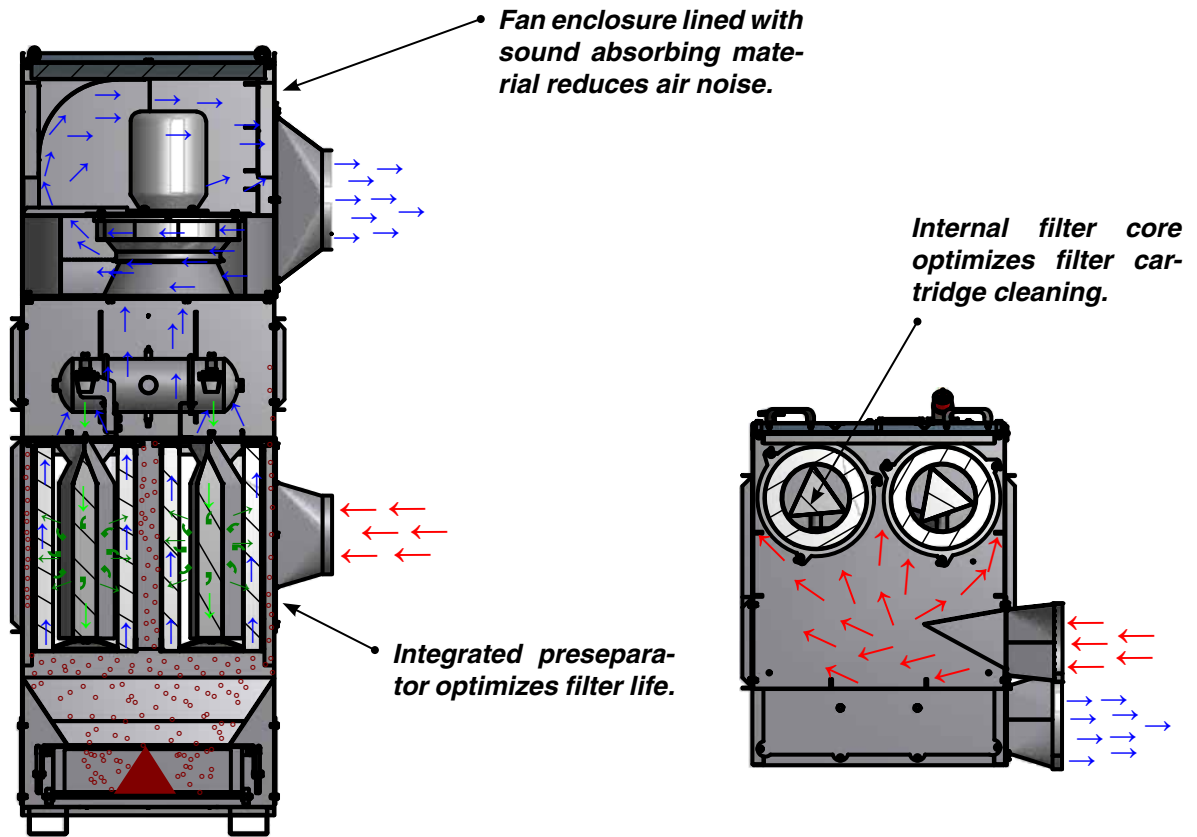
Filter material:

| Standard | Material | Used for |
|--------------------|--|---|
| G102 | Polyester flake | Dry not-static loaded or hygroscopic dust particles > 0.2µm |
| Alternative | | |
| G105 | Cellulose/Polyester | Welding/soldering |
| G107 | Cellulose/Polyester Nano | Smoke and soot particles |
| G113 | Polyester flake with PFPT-coating, antistatic | Static-loaded or hygroscopic particles |
| G115A | Polyester flake with teflon membrane | Finer dust sorts, e.g. cutting smoke from plasma, flame and laser cutting |
| G116A | Polyester flake with teflon membrane, antistatic | Finer static-loaded dust sorts |

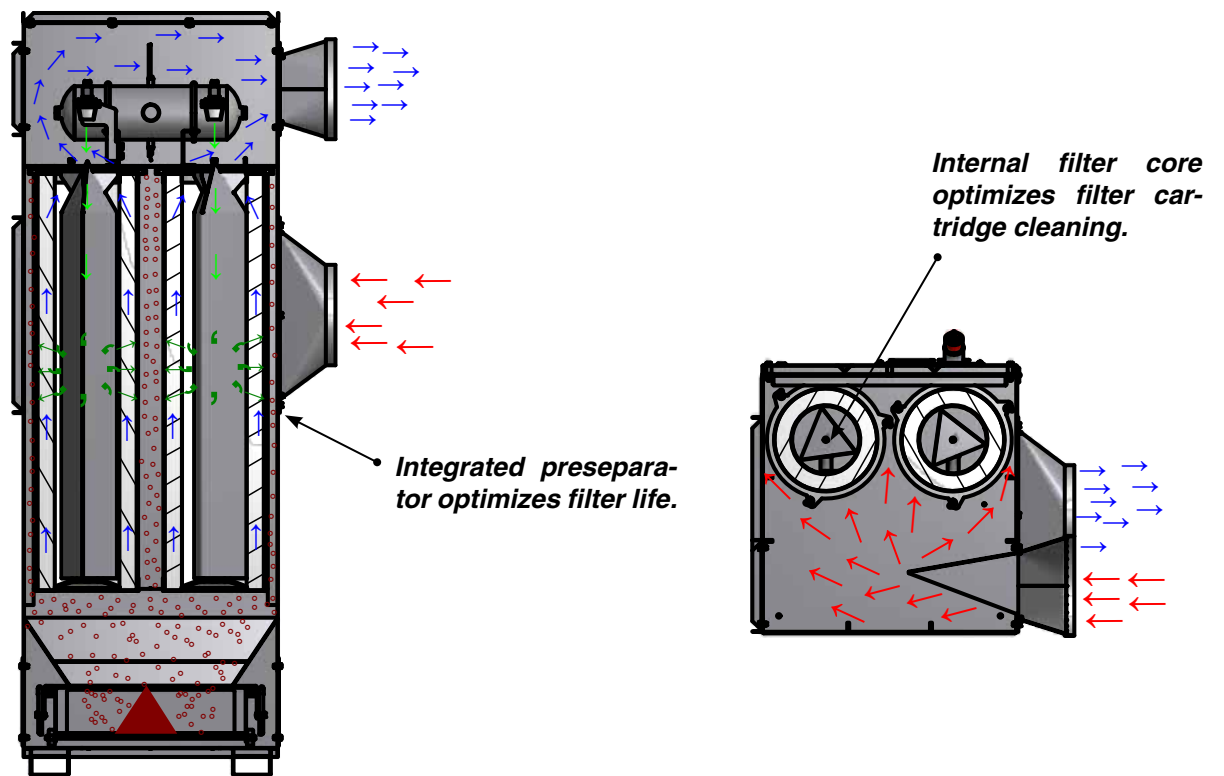


The filters meet demands for extraction degree for dust class M according to DIN EN 60335-2-69 Appendix AA (extraction degree > 99.9%).

Principle sketch for flow through Filterline type FL with built-in fan:



Principle sketch for flow through Filterline type FL without built-in fan:



Construction/surface

Filterline type FL is constructed according to:

- Machine directive 2006/42/EU
- EMC-directive 2014/30/EU
- Directive 2014/68/EU about pressure equipment
- Low voltage directive 2014/35/EU
- Harmonized standards: EN 349, EN 4414, EN 12100, EN 60204-1, EN ISO 13857
- Further standards: ISO 3746

Filter cabinet is made in 2mm black steel plate
Surface powder enamelled RAL 5007/7011 structure

Further is available:

- Version in hot-galvanized, enamelled steel plates for outdoor mounting
- Backdraft damper type KTR for piping placement
- ½"-water separator with manometer and pressure reducing valve
- Remote start/stop by magnetic operated motor protection 230VAC-coil voltage
- Channel silencer for noise damping in outlet air
- Precoat unit type PCA (04 399 100)
- Precoat 11.5kg in sack (04 398 500)
- Unit with mounted Airtower air distribution modules (only FL 52/VE 5500 and FL 104/VE 7500) - see data sheet for Airtower modules type PFL
- Unit designed for filtration of welding smoke class W3 - see data sheet for W3-version

Photo:
Filterline type FL 26/VE 3000 in RAL 7035/7011
with channel silencer



Photo: Airtower type PFL 52/VE 5500



Photo: Filterline type FL 104 without fan

Filterline type FL is available in the sizes as stated in the forms below.

Please, contact us for assistance in selecting the optimal unit taking into consideration air volume, dust type and volume, operation times etc.

Filterline type FL without built-in fan:

| Type | Order no. | ΔP start/end ³⁾ [Pa] | Numbr filter cartridges | Number jet valves | G102 filter area [m ²] | G105 filter area [m ²] | Compressed-air [L/min.] | Dust container [L] | Weight [kg] |
|--------|------------|---|-------------------------|-------------------|------------------------------------|------------------------------------|-------------------------|--------------------|-------------|
| FL 26 | 04 627 000 | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 260 |
| FL 52H | 04 627 250 | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 300 |
| FL 52 | 04 628 000 | 200/2000 | 4 ¹⁾ | 4 | 52 | 84 | 30 | 48 | 350 |
| FL 104 | 04 629 000 | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 420 |

Filterline type FL with built-in fan:

| Type | Order no. | ΔP start/end ³⁾ [Pa] | Numbr filter cartridges | Number jet valves | G102 filter area [m ²] | G105 filter area [m ²] | Compressed-air [L/min.] | Dust container [L] | Weight [kg] |
|------------------------------|--------------------------|---|-------------------------|-------------------|------------------------------------|------------------------------------|-------------------------|--------------------|-------------|
| FL 26/VE 2200 ⁶⁾ | 04 618 000 ⁴⁾ | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 385 |
| FL 26/VE 3000 ⁶⁾ | 04 619 000 ⁴⁾ | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 395 |
| FL 26/RV 35/2S ⁶⁾ | 04 677 100 ⁵⁾ | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 430 |
| FL 26/RV 35/3 ⁶⁾ | 04 677 000 ⁵⁾ | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 430 |
| FL 52/VE 4000 ⁶⁾ | 04 620 000 ⁵⁾ | 200/2000 | 4 ¹⁾ | 4 | 52 | 84 | 30 | 48 | 480 |
| FL 52/VE 5500 ⁶⁾ | 04 621 000 ⁵⁾ | 200/2000 | 4 ¹⁾ | 4 | 52 | 84 | 30 | 48 | 490 |
| FL 52/RV 45 ⁷⁾ | 04 677 500 ⁵⁾ | 200/2000 | 4 ¹⁾ | 4 | 52 | 84 | 30 | 48 | 500 |
| FL 52H/VE 4000 ⁶⁾ | 04 618 250 ⁵⁾ | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 420 |
| FL 52H/VE 5500 ⁶⁾ | 04 618 500 ⁵⁾ | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 430 |
| FL 52H/RV 45 ⁷⁾ | 04 678 050 ⁵⁾ | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 566 |
| FL 104/VE 5500 ⁶⁾ | 04 622 000 ⁵⁾ | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 540 |
| FL 104/VE 7500 ⁷⁾ | 04 623 000 ⁵⁾ | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 550 |
| FL 104/RV 45 ⁷⁾ | 04 678 100 ⁵⁾ | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 560 |
| FL 104/RV 50 ⁷⁾ | 04 678 000 ⁵⁾ | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 566 |

¹⁾ Filter cartridge $\phi 325 \times 660\text{mm}/\phi 13.5\text{mm}$, 13m², G102(08 128 100)

²⁾ Filter cartridge $\phi 325 \times 1320\text{mm}/\phi 13.5\text{mm}$, 26m², G102 (08 129 000)

³⁾ Pressure drop stated over filter cartridge

⁴⁾ Supply plug 16A

⁵⁾ Supply plug 32A

⁶⁾ Delivered with hand-operated motor protection

⁷⁾ Delivered with star-delta-starter

Consumption data for Filterline type FL with built-in fan:

| Type | Volt [V] | [rpm.] | [kW] | Rated current (Amp) | Start current [I _L /I _N] |
|----------------|----------|--------|---------------------|---------------------|---|
| VE 2200-FL-C2 | 3x400 | 2800 | 2.20 | ■ | ■ |
| VE 3000-FL-C2 | 3x400 | 2800 | 3.00 | ■ | ■ |
| VE 4000-FL-C2 | 3x400 | 2800 | 4.00 | ■ | ■ |
| VE 5500-FL-C2 | 3x400 | 2800 | 5.50 | ■ | ■ |
| VE 7500-FL-C2 | 3x400 | 2800 | 7.50 | ■ | ■ |
| RV 35/2S-FL-C2 | 3x400 | 2910 | 5.50 ⁸⁾ | ■ | ■ |
| RV 35/3-FL-C2 | 3x400 | 2910 | 5.50 ⁸⁾ | ■ | ■ |
| RV 45-FL-C2 | 3x400 | 2800 | 7.50 | ■ | ■ |
| RV 50-FL-C2 | 3x400 | 2930 | 11.00 ⁸⁾ | ■ | ■ |

⁸⁾ Increased efficiency

Motor data $\geq 0.75\text{kW}$, 3x400V, according to IE3-motors.

■ See section "General information" conc. electro motors

Filterline type FL with fan prepared for operation with frequency converter/external motor starter:

| Type | Order no. | ΔP start/end ³⁾ [Pa] | Numbr filter cartridges | Number jet valves | G102 filter area [m ²] | G105 filter area [m ²] | Copressed air [L/min.] | Dust container [L] | Weight [kg] |
|----------------|------------|---|-------------------------|-------------------|------------------------------------|------------------------------------|------------------------|--------------------|-------------|
| FL 26/VE 2200 | 04 618 150 | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 385 |
| FL 26/VE 3000 | 04 619 150 | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 395 |
| FL 26/RV 35/2 | 04 677 250 | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 417 |
| FL 26/RV 35/3 | 04 677 150 | 200/2000 | 2 ¹⁾ | 2 | 26 | 42 | 30 | 35 | 430 |
| FL 52/VE 4000 | 04 620 150 | 200/2000 | 4 ¹⁾ | 4 | 52 | 84 | 30 | 48 | 480 |
| FL 52/VE 5500 | 04 621 150 | 200/2000 | 4 ¹⁾ | 4 | 52 | 84 | 30 | 48 | 490 |
| FL 52/RV 45 | 04 677 650 | 200/2000 | 4 ¹⁾ | 4 | 52 | 84 | 30 | 48 | 500 |
| FL 52H/VE 4000 | 04 618 400 | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 420 |
| FL 52H/VE 5500 | 04 618 650 | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 430 |
| FL 52H/RV 35/2 | 04 677 350 | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 420 |
| FL 52H/RV 35/3 | 04 677 450 | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 430 |
| FL 52H/RV 45 | 04 678 200 | 200/2000 | 2 ²⁾ | 2 | 52 | 84 | 30 | 35 | 566 |
| FL 104/VE 5500 | 04 622 150 | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 540 |
| FL 104/VE 7500 | 04 623 150 | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 550 |
| FL 104/RV 45 | 04 678 250 | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 560 |
| FL 104/RV 50 | 04 678 150 | 200/2000 | 4 ²⁾ | 4 | 104 | 168 | 30 | 48 | 566 |

¹⁾ Filter cartridge $\phi 325 \times 660\text{mm}/\phi 13.5\text{mm}$, 13m², G102(08 128 100)

²⁾ Filter cartridge $\phi 325 \times 1320\text{mm}/\phi 13.5\text{mm}$, 26m², G102 (08 129 000)

³⁾ Pressure drop stated over filter cartridge

Consumption data for Filterline type FL with fan prepared for operation with frequency converter/external motor starter:

| Type ⁴⁾ | Volt [V] | [rpm.] | [kW] | Rated current (Amp) | Start current [I_L/I_N] |
|--------------------|----------|--------|---------------------|---------------------|-----------------------------|
| VE 2200-FL-C2 | 3x400 | 2800 | 2,20 | ■ | ■ |
| VE 3000-FL-C2 | 3x400 | 2800 | 3,00 | ■ | ■ |
| VE 4000-FL-C2 | 3x400 | 2800 | 4,00 | ■ | ■ |
| VE 5500-FL-C2 | 3x400 | 2800 | 5,50 | ■ | ■ |
| VE 7500-FL-C2 | 3x400 | 2800 | 7,50 | ■ | ■ |
| RVH 35/2-FL-C2 | 3x400 | 2800 | 4,00 | ■ | ■ |
| RV 35/3-FL-C2 | 3x400 | 2910 | 5,50 ⁵⁾ | ■ | ■ |
| RV 45-FL-C2 | 3x400 | 2800 | 7,50 | ■ | ■ |
| RV 50-FL-C2 | 3x400 | 2930 | 11,00 ⁵⁾ | ■ | ■ |

⁴⁾ Delivered incl. thermo sensor

Motor data $\geq 0.75\text{kW}$, 3x400V, according to IE3-motors.

⁵⁾ Increased efficiency

■ See section "General information" conc. electro motors

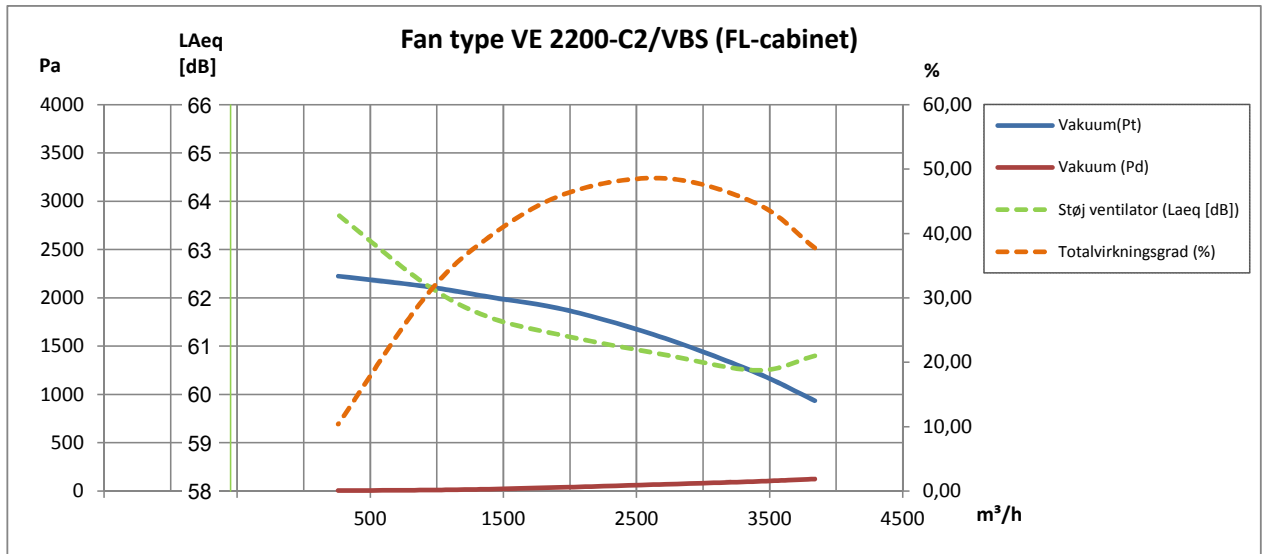
Other technical data:

| Fan* | Achieved efficiency | Measurement category | Efficiency category | VSD | Production year | Manufacturer page | Modul number/ type | Rated motor power input, flow rate and pressure | | | Rpm. | Specific ratio | Disposal page | Environment page | Mounting measurement page |
|---------------|---------------------|----------------------|---------------------|-----|-----------------|-------------------|--------------------|---|-------------------|---------|------|----------------|---------------|------------------|---------------------------|
| | | | | | | | | kW | m ³ /h | Pa (Ps) | | | | | |
| VE 2200-FL-C2 | 61,5 | D | Total | No | CE-mark | A15 | 03 384 000 | 2,56 | 3257 | 1705 | 2853 | 1,02 | A15 | A15 | A15 |
| VE 3000-FL-C2 | 59,9 | D | Total | No | CE-mark | A15 | 03 386 000 | 2,99 | 3596 | 1760 | 2929 | 1,02 | A15 | A15 | A15 |
| VE 4000-FL-C2 | 55,7 | D | Total | No | CE-mark | A15 | 03 388 000 | 4,23 | 4668 | 1780 | 2929 | 1,02 | A15 | A15 | A15 |
| VE 5500-FL-C2 | 58,0 | D | Total | No | CE-mark | A15 | 03 390 000 | 6,07 | 4741 | 2620 | 2936 | 1,03 | A15 | A15 | A15 |
| VE 7500-FL-C2 | 57,0 | D | Total | No | CE-mark | A15 | 03 392 000 | 5,95 | 4383 | 2735 | 2951 | 1,03 | A15 | A15 | A15 |
| RV 35/2-FL-C2 | 51,3 | D | Total | No | CE-mark | A15 | 03 401 700 | 4,40 | 2156 | 3780 | 2925 | 1,04 | A15 | A15 | A15 |
| RV 35/3-FL-C2 | 51,3 | D | Total | No | CE-mark | A15 | 03 402 000 | 5,04 | 2700 | 4085 | 2945 | 1,04 | A15 | A15 | A15 |
| RV 45-FL-C2 | 64,3 | D | Total | No | CE-mark | A15 | 03 406 400 | 8,08 | 5432 | 3380 | 2933 | 1,03 | A15 | A15 | A15 |
| RV 50-FL-C2 | 68,2 | D | Total | No | CE-mark | A15 | 03 410 400 | 9,84 | 6561 | 3610 | 2942 | 1,04 | A15 | A15 | A15 |

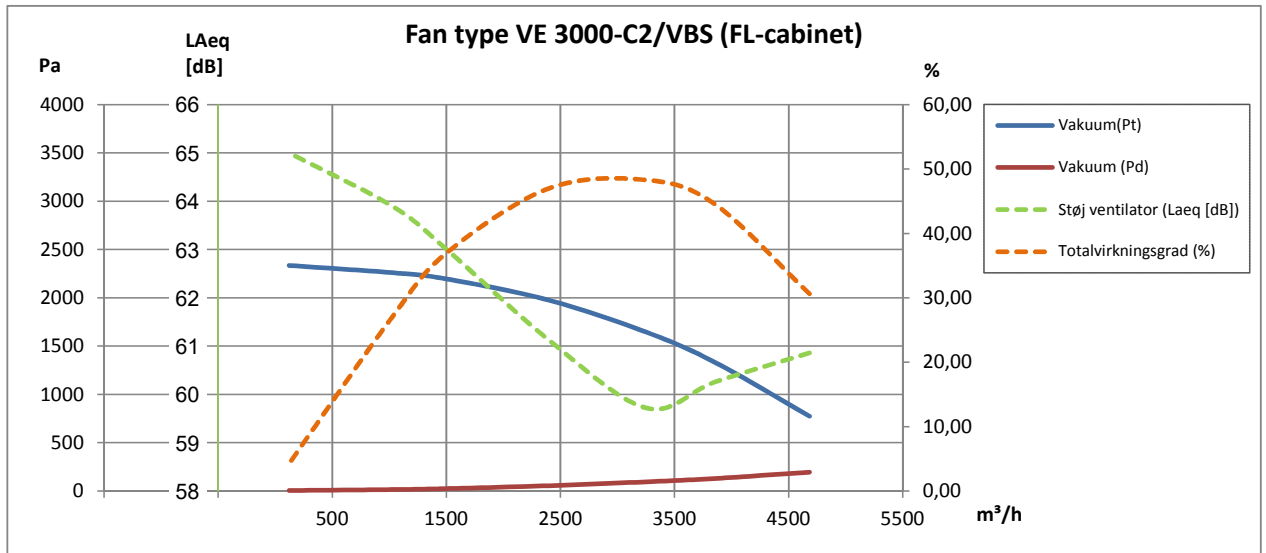
* None of fans are subject to ERP 2013/2015 according to EU327/2011

Rev. 21.21 Data is subject to alterations

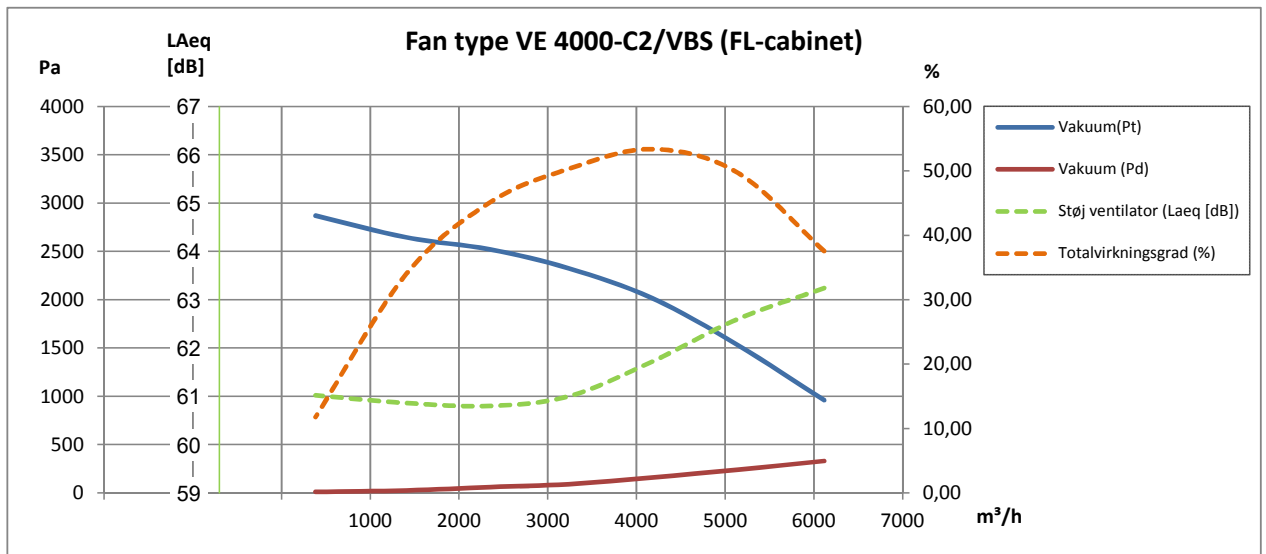
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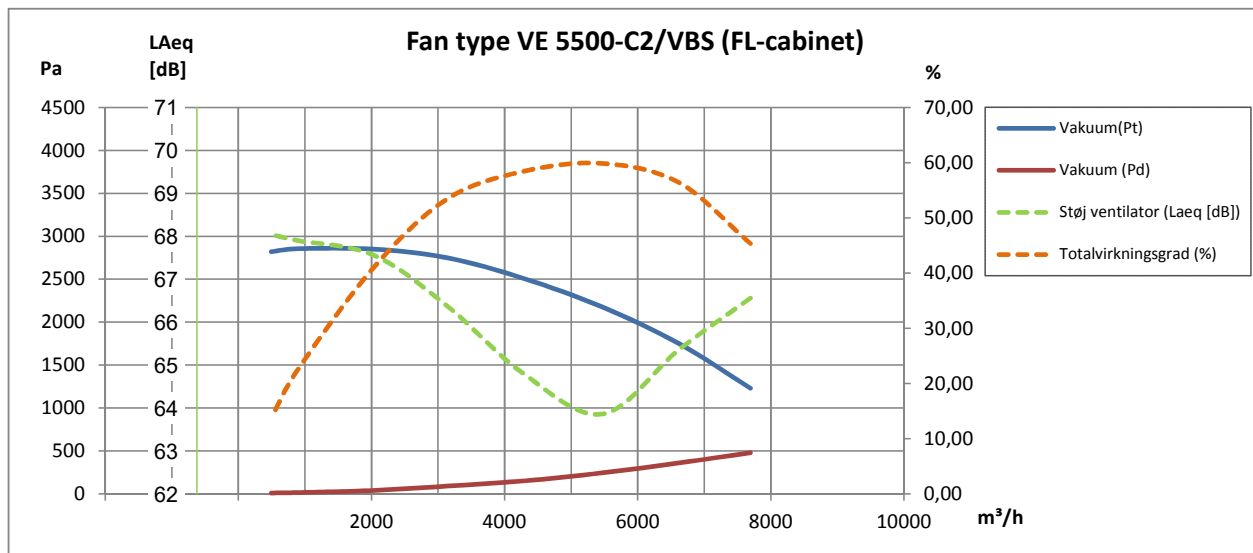
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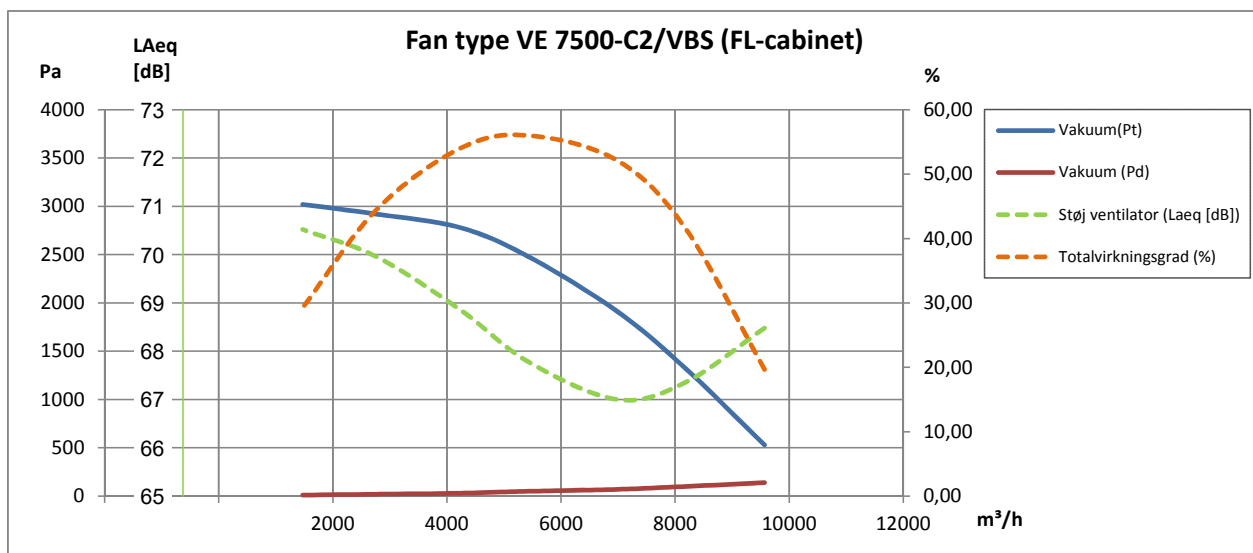
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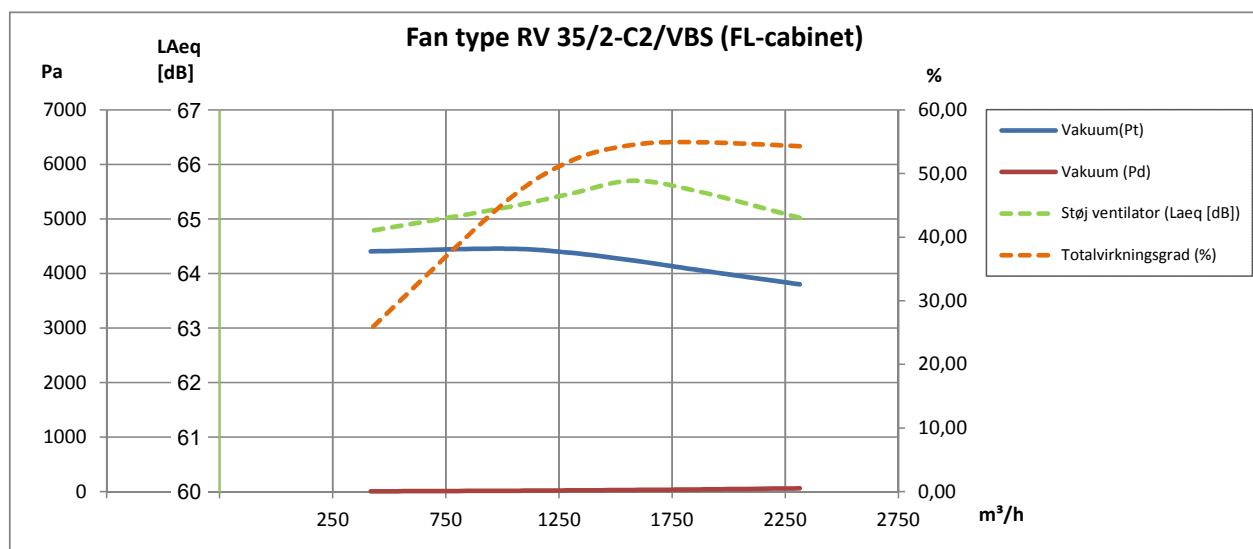
2-pole:



2-pole:

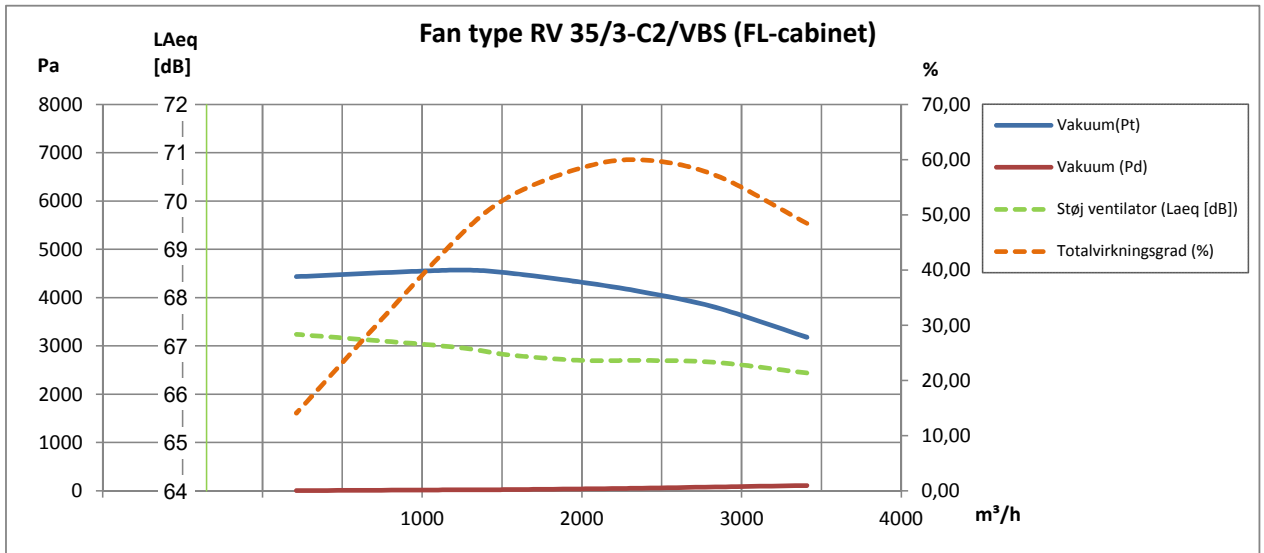


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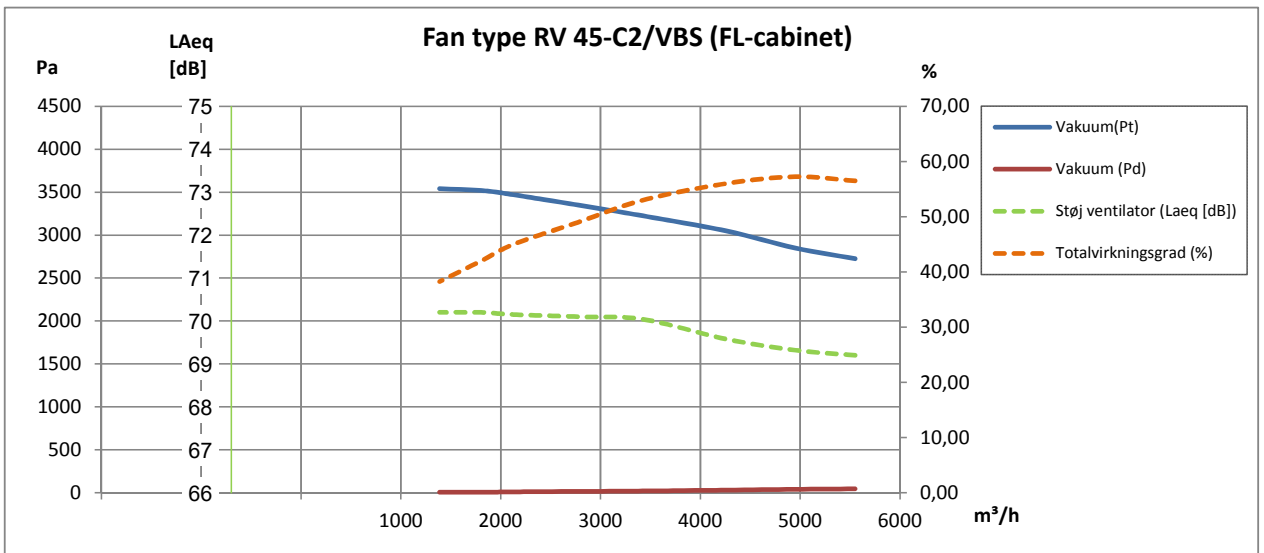


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2-pole:



2-pole:



2-pole:

