

RECTANGULAR INLINE FANS

 Series
VENTS VKP EC


Centrifugal fans with air flow
up to **11190 m³/h**
for rectangular ducts

Application

Supply and exhaust ventilation and air conditioning systems for various premises requiring cost-effective solution and controlled ventilation. EC motors in VKP fans reduce energy consumption by 1.5-3 times and ensure high performance and low noise level. Such characteristics are of special importance for ventilation of banks, supermarkets, restaurants, hotels and other public facilities including swimming pool ventilation. The fans are compatible with 300x150, 400x200, 500x250, 500x300, 600x300, 600x350, 700x400, 800x500, 900x500, 1000x500 mm rectangular ducts.

Design

Fan casing is made of galvanized steel. All inner components are interconnected by means of rivets. The fan is equipped with 20 mm standard flanges.

Motor

The impellers with backward curved blades are powered with high efficient electronically commutated (EC) direct current motors with external rotor. As of today, such motor type is the most advanced solution for energy saving. EC motors are featured by high performance and the optimal control over the

whole range of fan speeds. Premium efficiency reaching up to 90 % is an absolute advantage of electronically commutated motors.

Integrated functions and control

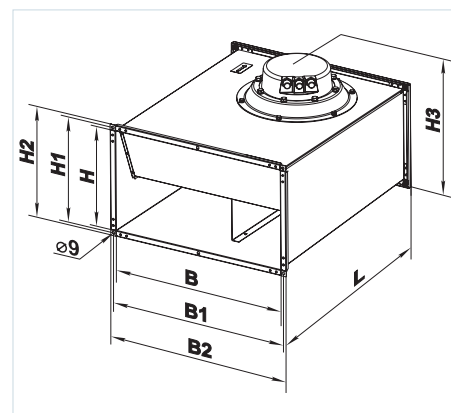
The fan is controlled with the external control signal 0-10 V (air flow as a function of temperature level, pressure and smoke conditions etc). Should the control value factor get changed, the EC motor changes its speed and the fan boosts as much air flow to the ventilation system as required. Maximum speed of the fan does not depend on the current frequency and it can operate at 50 or 60 Hz mains supply. The fans can be integrated to the unified PC control system. The respective software allows controlling all the fan units with high accuracy and setting particular operation mode for each fan.

Mounting

The fans are mounted into the rectangular ducts. The fans can be mounted in any position with respect to the airflow direction which is indicated with a pointer on the casing. Access for the fan maintenance shall be provided. The casing is equipped with a removable access door for inspection and maintenance purposes.

Fan overall dimensions

| Type | Dimensions [mm] | | | | | | | | Mass [kg] |
|--------------------|-----------------|------|------|-----|-----|-----|-----|-----|-----------|
| | B | B1 | B2 | H | H1 | H2 | H3 | L | |
| VKP 300x150 M1 EC | 300 | 320 | 340 | 150 | 170 | 190 | 228 | 350 | 5.5 |
| VKP 300x150 L1 EC | 300 | 320 | 340 | 150 | 170 | 190 | 228 | 350 | 6.0 |
| VKP 400x200 M1 EC | 400 | 420 | 440 | 200 | 220 | 240 | 278 | 440 | 8.3 |
| VKP 400x200 L1 EC | 400 | 420 | 440 | 200 | 220 | 240 | 286 | 440 | 10.0 |
| VKP 500x250 M1 EC | 500 | 520 | 540 | 250 | 270 | 290 | 328 | 530 | 15.7 |
| VKP 500x250 L1 EC | 500 | 520 | 540 | 250 | 270 | 290 | 360 | 530 | 17.9 |
| VKP 500x300 L1 EC | 500 | 520 | 540 | 300 | 320 | 340 | 410 | 530 | 18.7 |
| VKP 600x300 M1 EC | 600 | 620 | 640 | 300 | 320 | 340 | 407 | 650 | 24.1 |
| VKP 600x350 L3 EC | 600 | 620 | 640 | 350 | 370 | 390 | 512 | 650 | 36.0 |
| VKP 600x350 M1 EC | 600 | 620 | 640 | 350 | 370 | 390 | 457 | 650 | 25.2 |
| VKP 700x400 L3 EC | 700 | 720 | 740 | 400 | 420 | 440 | 555 | 750 | 43.0 |
| VKP 700x400 M1 EC | 700 | 720 | 740 | 400 | 420 | 440 | 496 | 750 | 42.2 |
| VKP 800x500 L3 EC | 800 | 820 | 840 | 500 | 520 | 540 | 670 | 850 | 54.3 |
| VKP 800x500 M3 EC | 800 | 820 | 840 | 500 | 520 | 540 | 614 | 850 | 62.3 |
| VKP 900x500 L3 EC | 900 | 920 | 940 | 500 | 520 | 540 | 656 | 950 | 72.0 |
| VKP 1000x500 L3 EC | 1000 | 1020 | 1040 | 500 | 520 | 540 | 656 | 950 | 77.0 |


Designation key

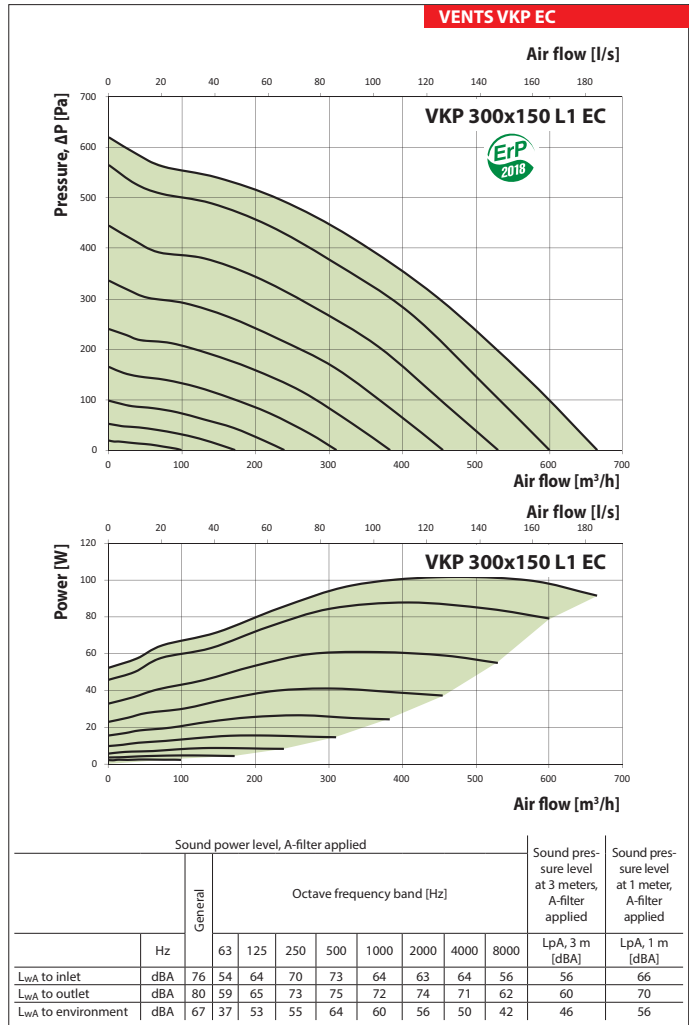
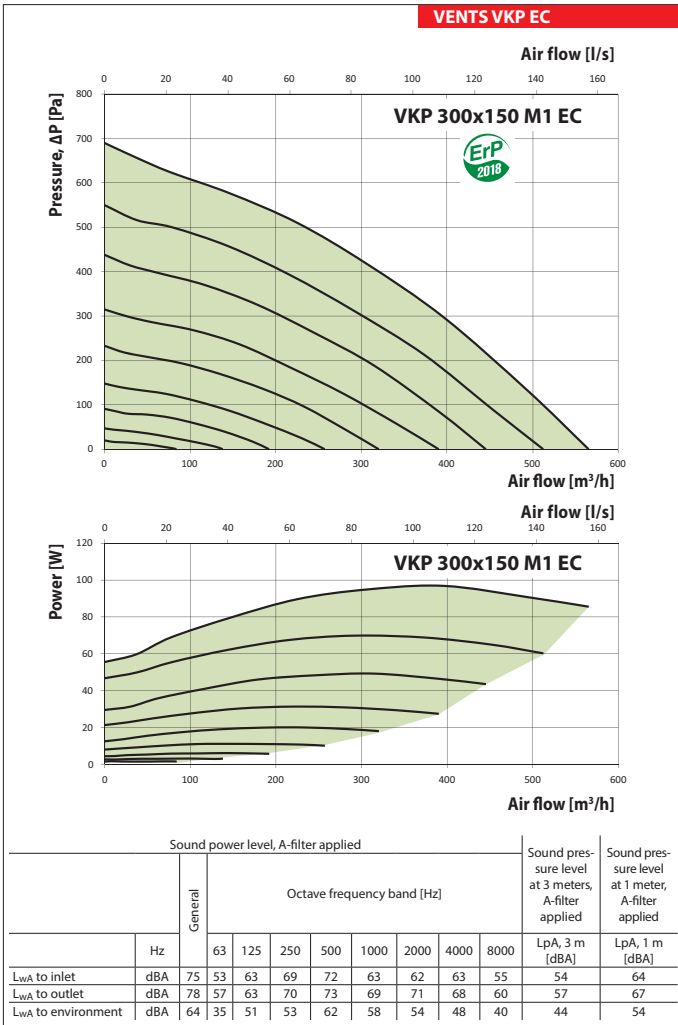
| Series | Flange diameter [WxH] | Motor modification | Phase | Motor |
|------------------|---|--|---|--|
| VENTS VKP | 300x150, 400x200, 500x250, 500x300, 600x300, 600x350, 700x400, 800x500, 900x500, 1000x500 | M: medium pressure motor L: high pressure motor | 1: single phase 3: three phase | EC: synchronous electronically commutated motor |

Accessories


Technical data

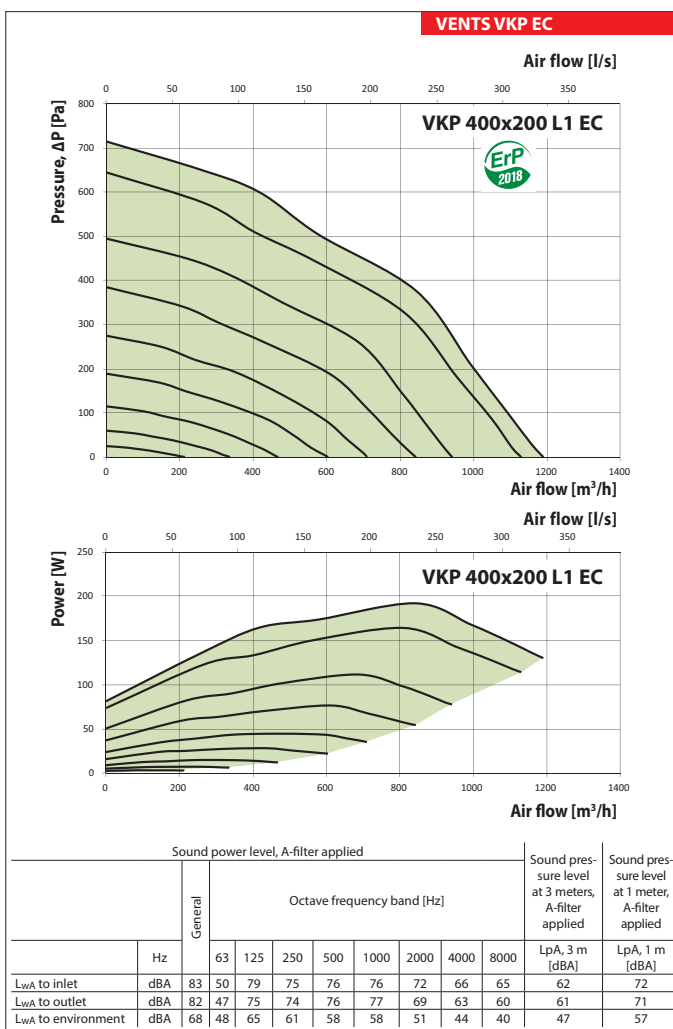
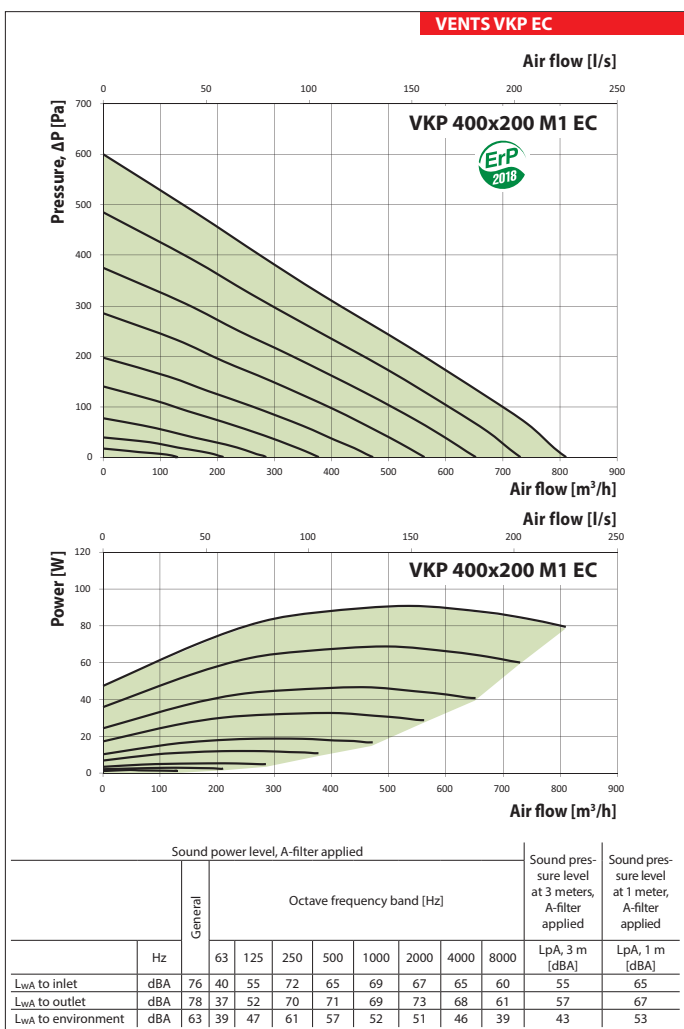
| | VKP 300x150 M1 EC | VKP 300x150 L1 EC |
|----------------------------------|-------------------|-------------------|
| Voltage [V/50 (60) Hz] | 1~200-277 | 1~200-277 |
| Power [W] | 97 | 101 |
| Current [A] | 0.73 | 0.80 |
| Maximum air flow [m³/h] | 565 | 665 |
| RPM [min ⁻¹] | 3300 | 3500 |
| Noise level at 3 m [dBA] | 44 | 46 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | B | B |
| Motor protection | IP55 | IP54 |
| Protection rating | IPX4 | |

VENTS
FAN SERIES
VKP EC



RECTANGULAR INLINE FANS
Technical data

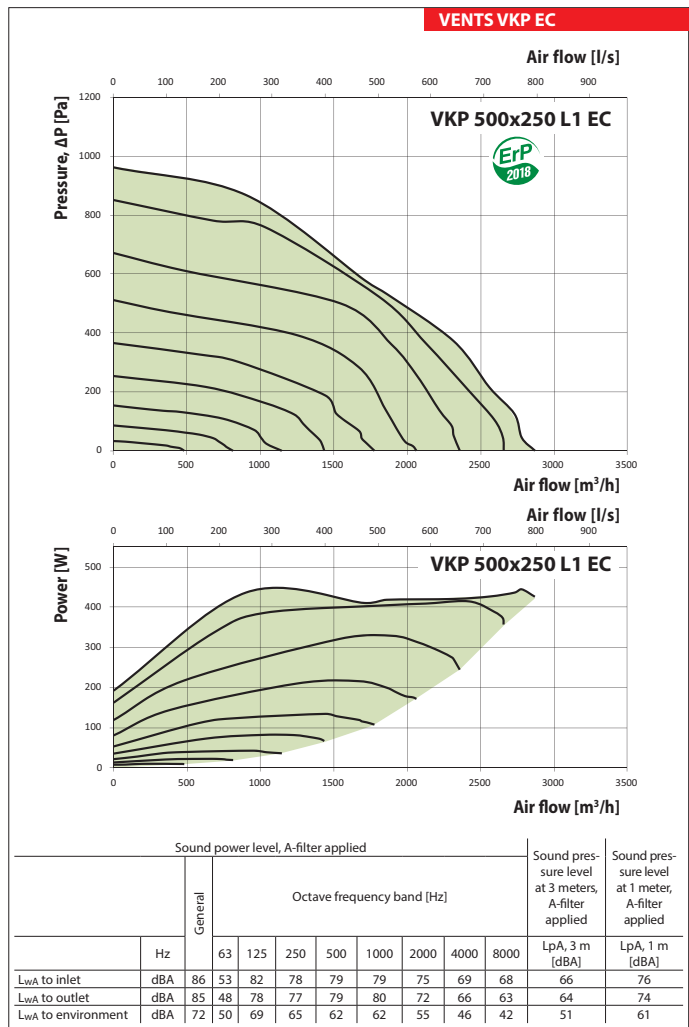
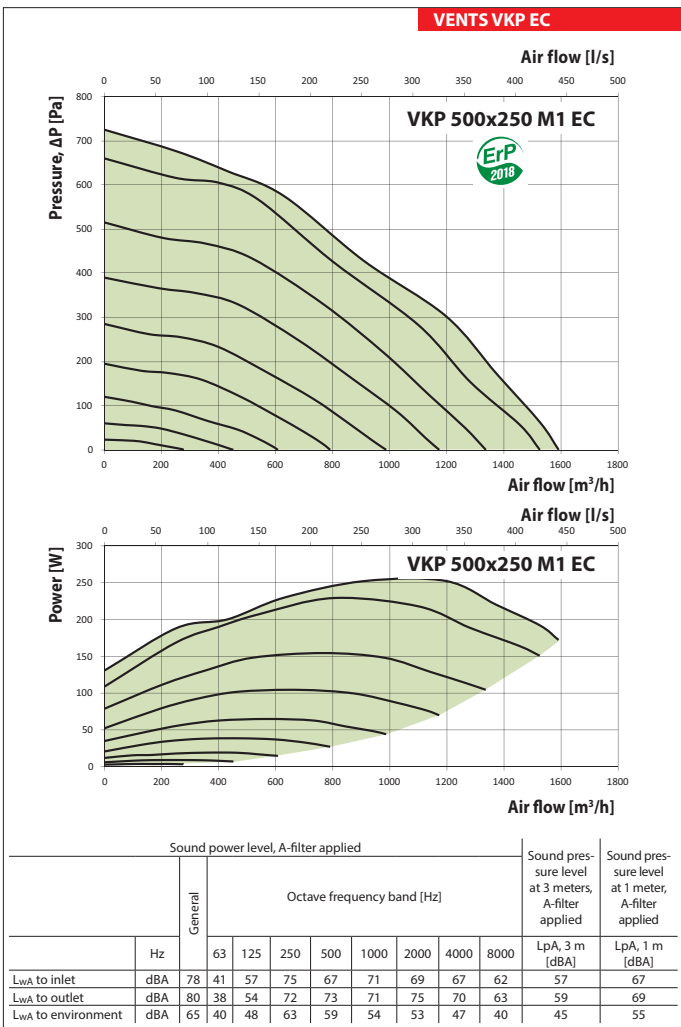
| | VKP 400x200 M1 EC | VKP 400x200 L1 EC |
|--------------------------------------|-------------------|-------------------|
| Voltage [V/50 (60) Hz] | 1~200-277 | 1~200-277 |
| Power [W] | 91 | 192 |
| Current [A] | 0.69 | 1.43 |
| Maximum air flow [m ³ /h] | 810 | 1190 |
| RPM [min ⁻¹] | 2470 | 3010 |
| Noise level at 3 m [dBA] | 43 | 47 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | B | - |
| Motor protection | IP55 | IP54 |
| Protection rating | IPX4 | |



Technical data

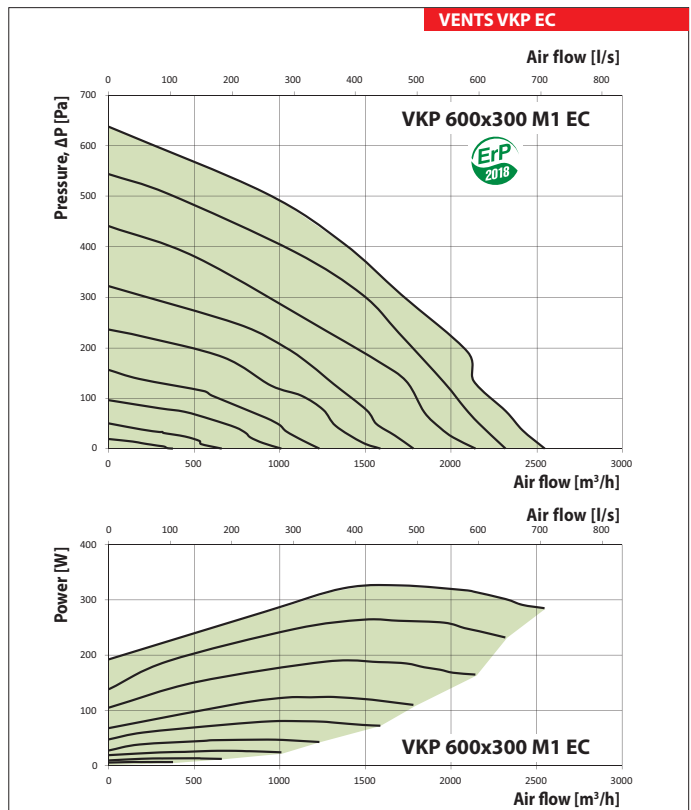
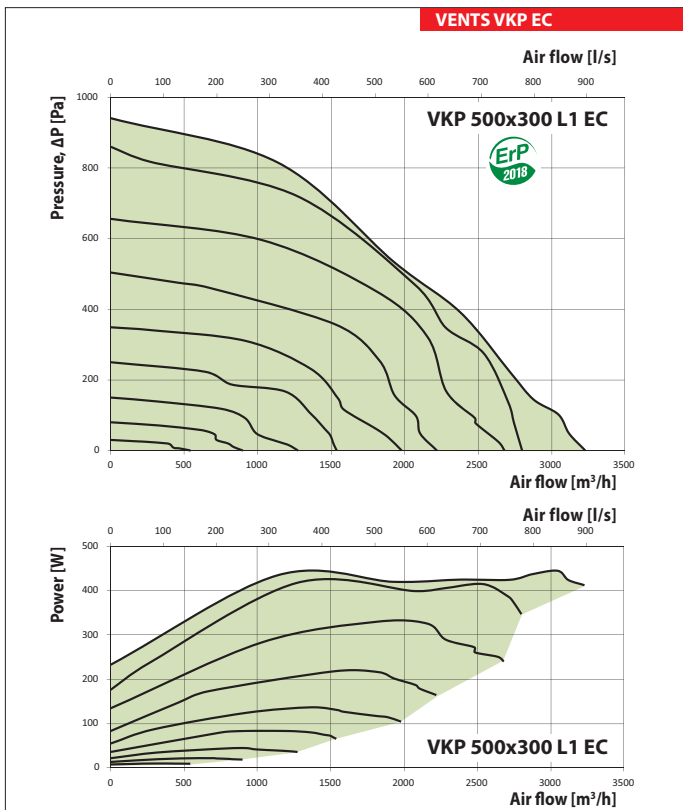
| | VKP 500x250 M1 EC | VKP 500x250 L1 EC |
|----------------------------------|-------------------|-------------------|
| Voltage [V/50 (60) Hz] | 1~200-277 | 1~200-277 |
| Power [W] | 252 | 444 |
| Current [A] | 1.85 | 3.35 |
| Maximum air flow [m³/h] | 1590 | 2870 |
| RPM [min ⁻¹] | 2500 | 3100 |
| Noise level at 3 m [dBA] | 45 | 51 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | - | - |
| Motor protection | IP54 | |
| Protection rating | IPX4 | |

VENTS
FAN SERIES
VKP EC



RECTANGULAR INLINE FANS
Technical data

| | VKP 500x300 L1 EC | VKP 600x300 M1 EC |
|----------------------------------|-------------------|-------------------|
| Voltage [V/50 (60) Hz] | 1~200-277 | 1~200-277 |
| Power [W] | 445 | 326 |
| Current [A] | 3.33 | 2.45 |
| Maximum air flow [m³/h] | 3230 | 2545 |
| RPM [min ⁻¹] | 3100 | 2000 |
| Noise level at 3 m [dBA] | 51 | 48 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | - | - |
| Motor protection | IP54 | |
| Protection rating | IPX4 | |



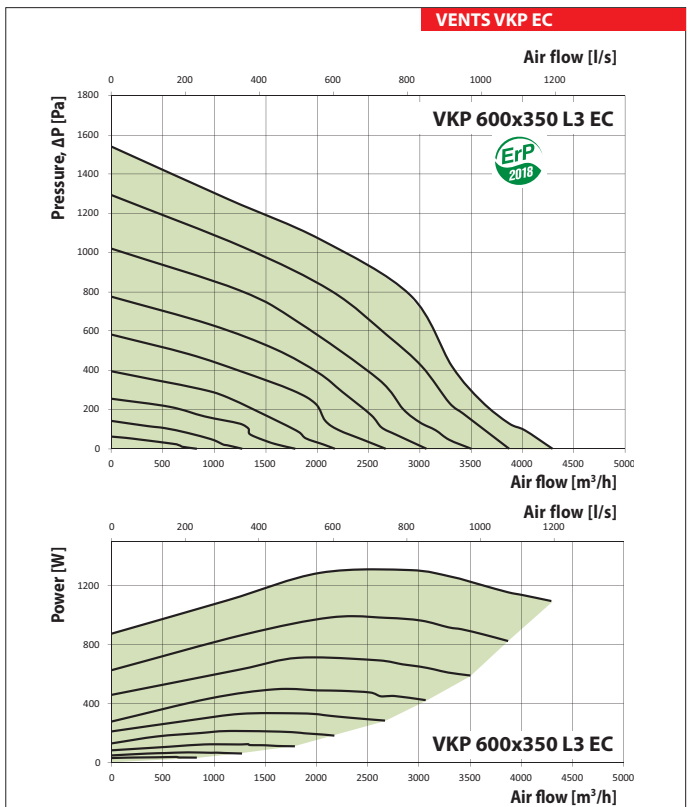
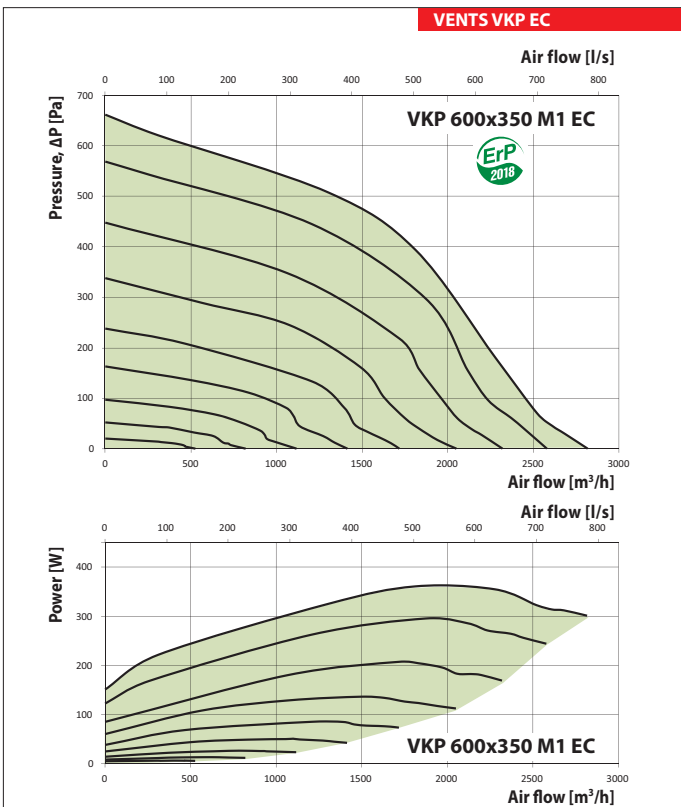
| Sound power level, A-filter applied | | | | | | | | | | | | |
|-------------------------------------|-----|----------------------------|-----|-----|-----|------|------|------|------|--|---|----|
| | Hz | Octave frequency band [Hz] | | | | | | | | Sound pressure level at 3 meters, A-filter applied LpA, 3 m [dBA] | Sound pressure level at 1 meter, A-filter applied LpA, 1 m [dBA] | |
| | | General | | | | | | | | | | |
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| L _{WA} to inlet | dBA | 85 | 50 | 80 | 78 | 78 | 78 | 75 | 69 | 67 | 65 | 75 |
| L _{WA} to outlet | dBA | 85 | 48 | 79 | 76 | 78 | 79 | 72 | 66 | 62 | 64 | 74 |
| L _{WA} to environment | dBA | 72 | 49 | 70 | 65 | 60 | 60 | 54 | 46 | 40 | 51 | 61 |

| Sound power level, A-filter applied | | | | | | | | | | | | |
|-------------------------------------|-----|----------------------------|-----|-----|-----|------|------|------|------|--|---|----|
| | Hz | Octave frequency band [Hz] | | | | | | | | Sound pressure level at 3 meters, A-filter applied LpA, 3 m [dBA] | Sound pressure level at 1 meter, A-filter applied LpA, 1 m [dBA] | |
| | | General | | | | | | | | | | |
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| L _{WA} to inlet | dBA | 80 | 42 | 58 | 77 | 69 | 73 | 71 | 69 | 64 | 60 | 70 |
| L _{WA} to outlet | dBA | 83 | 40 | 56 | 76 | 77 | 75 | 79 | 73 | 66 | 63 | 73 |
| L _{WA} to environment | dBA | 68 | 42 | 51 | 66 | 62 | 56 | 55 | 50 | 42 | 48 | 58 |

Technical data

| | VKP 600x350 M1 EC | VKP 600x350 L3 EC |
|----------------------------------|-------------------|-------------------|
| Voltage [V/50 (60) Hz] | 1~200-277 | 3~380-480 |
| Power [W] | 361 | 1308 |
| Current [A] | 2.62 | 2.35 |
| Maximum air flow [m³/h] | 2815 | 4290 |
| RPM [min ⁻¹] | 2000 | 3160 |
| Noise level at 3 m [dBA] | 49 | 55 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | - | - |
| Motor protection | IP54 | |
| Protection rating | IPX4 | |

VENTS
VKP EC
FAN SERIES

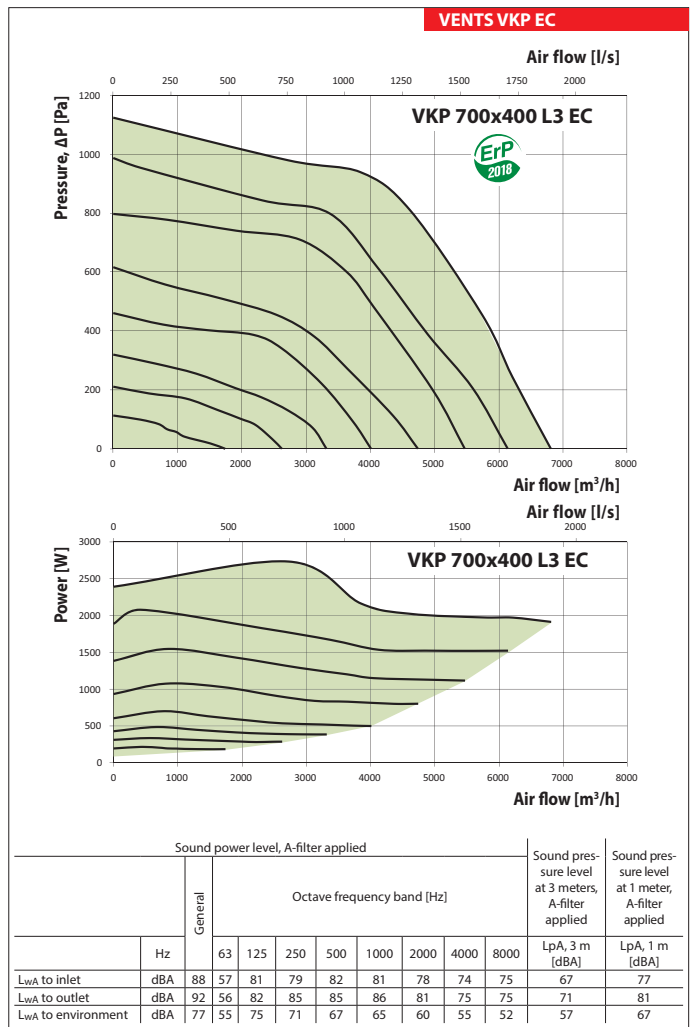
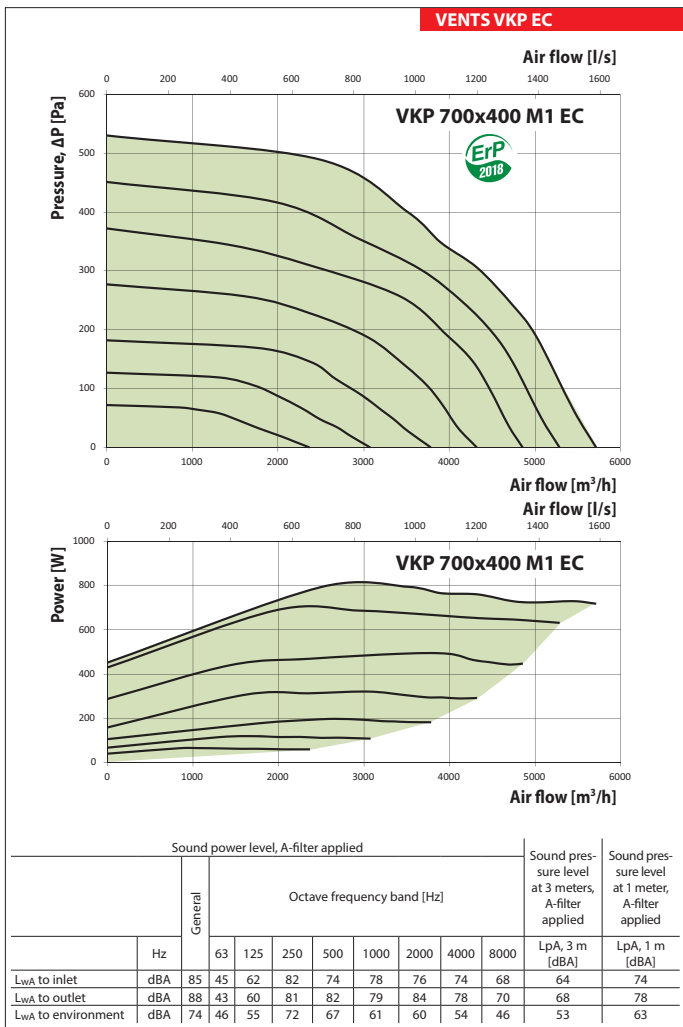


| Sound power level, A-filter applied | | | | | | | | | | Sound pressure level at 3 meters, A-filter applied | Sound pressure level at 1 meter, A-filter applied | |
|-------------------------------------|-----|----------------------------|-----|-----|-----|------|------|------|------|--|---|----|
| | | Octave frequency band [Hz] | | | | | | | | | | |
| | | General | | | | | | | | LpA, 3 m [dBA] | LpA, 1 m [dBA] | |
| | Hz | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| L _{WA} to inlet | dBA | 81 | 43 | 59 | 78 | 70 | 75 | 73 | 70 | 65 | 61 | 71 |
| L _{WA} to outlet | dBA | 85 | 41 | 57 | 77 | 78 | 76 | 80 | 75 | 67 | 64 | 74 |
| L _{WA} to environment | dBA | 69 | 43 | 52 | 67 | 63 | 57 | 56 | 50 | 43 | 49 | 59 |

| Sound power level, A-filter applied | | | | | | | | | | Sound pressure level at 3 meters, A-filter applied | Sound pressure level at 1 meter, A-filter applied | |
|-------------------------------------|-----|----------------------------|-----|-----|-----|------|------|------|------|--|---|----|
| | | Octave frequency band [Hz] | | | | | | | | | | |
| | | General | | | | | | | | LpA, 3 m [dBA] | LpA, 1 m [dBA] | |
| | Hz | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| L _{WA} to inlet | dBA | 89 | 53 | 84 | 82 | 82 | 82 | 79 | 72 | 70 | 69 | 79 |
| L _{WA} to outlet | dBA | 88 | 50 | 83 | 80 | 82 | 83 | 76 | 69 | 65 | 68 | 78 |
| L _{WA} to environment | dBA | 76 | 52 | 74 | 68 | 63 | 63 | 57 | 49 | 43 | 55 | 65 |

RECTANGULAR INLINE FANS
Technical data

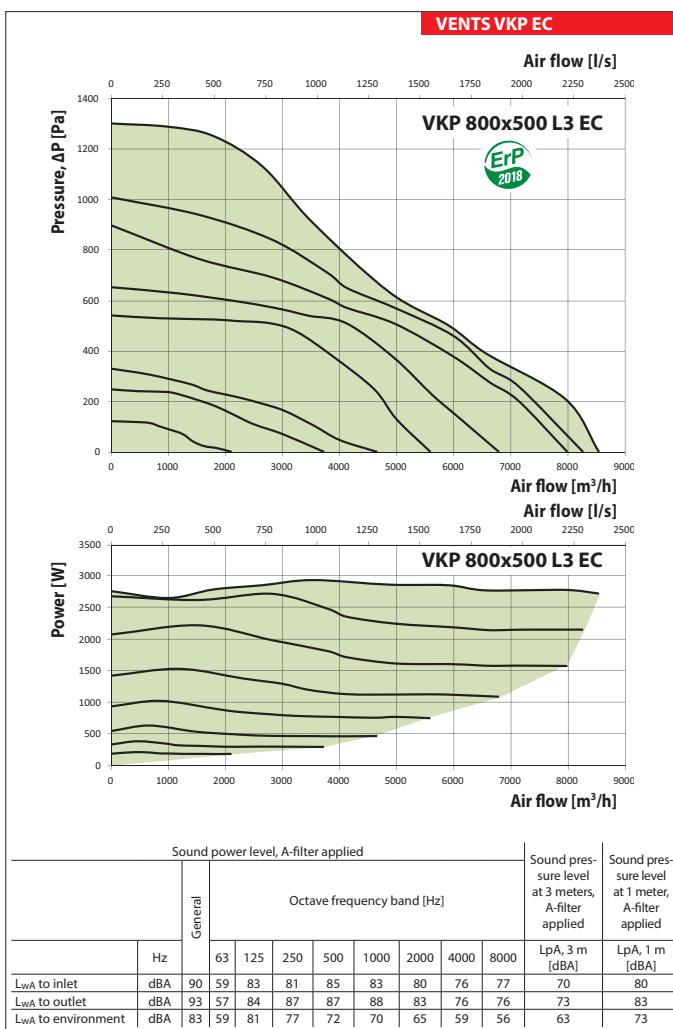
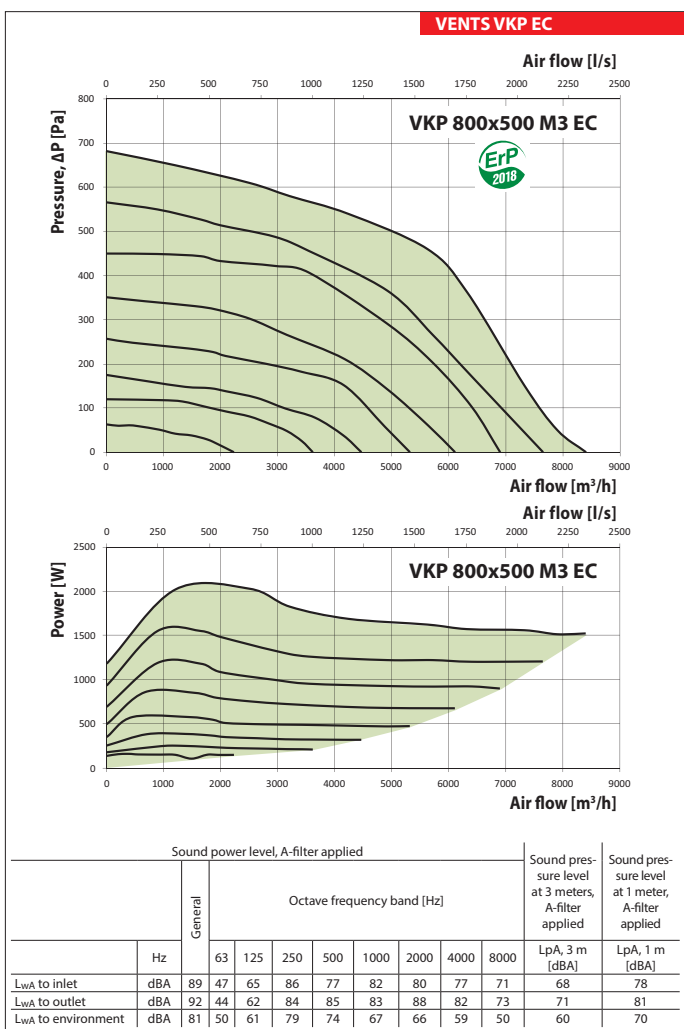
| | VKP 700x400 M1 EC | VKP 700x400 L3 EC |
|--------------------------------------|-------------------|-------------------|
| Voltage [V/50 (60) Hz] | 1~200-277 | 3~380-480 |
| Power [W] | 795 | 2748 |
| Current [A] | 3.48 | 2.80 |
| Maximum air flow [m ³ /h] | 5710 | 6810 |
| RPM [min ⁻¹] | 1400 | 2530 |
| Noise level at 3 m [dBA] | 53 | 57 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | - | - |
| Motor protection | IP54 | |
| Protection rating | IPX4 | |



Technical data

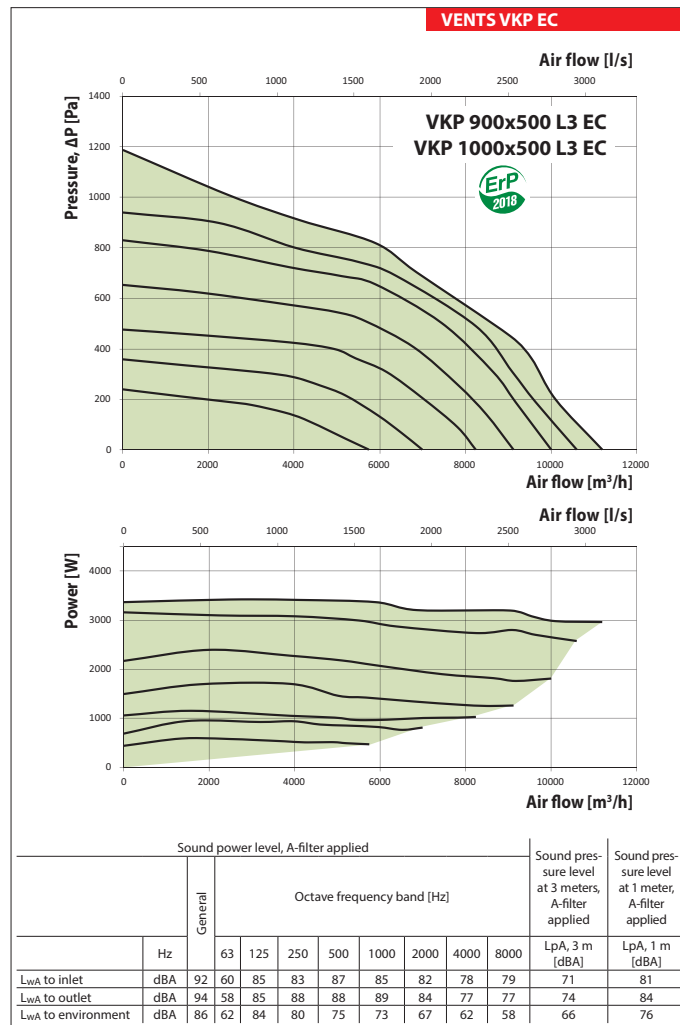
| | VKP 800x500 M3 EC | VKP 800x500 L3 EC |
|----------------------------------|-------------------|-------------------|
| Voltage [V/50 (60) Hz] | 3~380-480 | 3~380-480 |
| Power [W] | 2025 | 2925 |
| Current [A] | 2.01 | 3.05 |
| Maximum air flow [m³/h] | 8395 | 8535 |
| RPM [min ⁻¹] | 1470 | 2400 |
| Noise level at 3 m [dBA] | 60 | 63 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | - | - |
| Motor protection | IP54 | |
| Protection rating | IPX4 | |

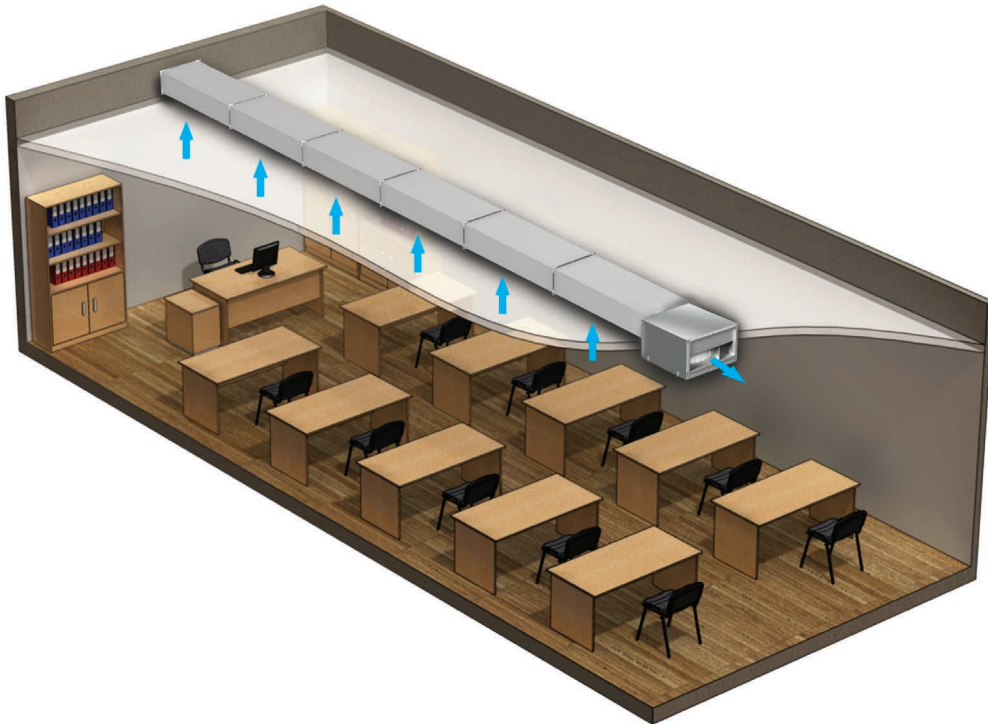
VENTS
FAN SERIES
VKP EC



RECTANGULAR INLINE FANS
Technical data

| | VKP 900x500 L3 EC | VKP 1000x500 L3 EC |
|--------------------------------------|-------------------|--------------------|
| Voltage [V/50 (60) Hz] | 3~380-480 | 3~380-480 |
| Power [W] | 3429 | 3429 |
| Current [A] | 5.00 | 5.00 |
| Maximum air flow [m ³ /h] | 11190 | 11190 |
| RPM [min ⁻¹] | 1800 | 1800 |
| Noise level at 3 m [dBA] | 66 | 66 |
| Transported air temperature [°C] | -25...+50 | |
| SEC class | - | - |
| Motor protection | IP54 | |
| Protection rating | IPX4 | |





VKP EC fan school class ventilation example



VKP EC fan car parking area ventilation example