

Series VENTS KSA



Centrifugal fans in heat-and sound-insulated casing with the air capacity up to **1500 m³/h**

■ Applications

KSA fan design enables their application in supply and exhaust ventilation systems for the premises with high noise level requirements. Suitable for connection with Ø 100, 125, 150, 160, 200 and 250 mm round ducts.

■ Design

The fan casing is made of aluzink. Heat- and sound-insulating layer is made of polystyrene foam.

■ Motor

The impeller made of galvanized steel and forward curved blades is powered by means of the 2- or 4-pole asynchronous motor with external rotor. The motor is equipped with the ball bearings for long service life. For precise features, safe operation and low noise, each impeller is dynamically balanced while assembly. Motor protection rating IP 44.

■ Speed control

Both smooth or step speed control is performed with the symistor or autotransformer controller. Several fans can be connected to one controller in case their total power and operating current do not exceed the controller rated values.

■ Mounting

Connection pipes have round section. The basic version of the fan includes the power cord with no plug. The power cord and C14 (KSA...R) plug can be supplied. Electric connection and mounting shall be performed in compliance with the operation manual and wiring diagram.

■ KSA fan with electronic module for speed control with temperature sensor

KSA fan with electronic module for temperature and speed is the perfect solution for greenhouses and other premises requiring air temperature control. Fans marked KSA...U fitted with TSC electronic speed control module with temperature sensor provide automatic

speed regulation as a function of air temperature in the duct. Temperature and minimum speed can be adjusted with two control knobs on the controller panel. The fan can be supplied with the external duct temperature sensor with 4 m cable and a cover for mechanical damage protection. The LED indicator for thermostat switching on is placed at the front panel of the fan.

■ Automatic speed controller pattern for KSA fans.

Set the desirable threshold temperature value for thermostat switching on by means of rotating the control knob. Normally the fan operates with the speed which is set with the knob. If the temperature exceeds the set point, the fan boosts to the maximum speed producing maximum air capacity. After that when the temperature drops down below the set point, the fan goes back to preset speed. The switching delay disables frequent motor switching (if the set temperature in the duct is equal to the threshold temperature).

There are two patterns of delay that may be used in various cases:

1. Temperature sensor delay (KSA...U): if the temperature rises by 2°C above the set threshold of thermostat actuation, the motor switches to the increased rotation speed. The motor switches to the preset (low) speed as the temperature drops below the set threshold of thermostat switching on. This pattern may be used to keep air temperature to within 2°C. In this case fan switches are rare.
2. Timer delay (KSA...U1): the motor sets to higher speed 5 min after the temperature exceeds the set threshold. The motor switches to the preset (low) speed 5 min. after the temperature drops below the set threshold.

This pattern can be used to keep the air temperature at a precise level. In this case the fan switches more frequently than in the pattern of temperature sensor delay, but the intervals do not exceed 5 minutes.

Designation key:

| Fan series | Connecting pipe diameter | Motor | | Options |
|------------|-----------------------------------|----------|------------------|--|
| | | Polarity | Phase | |
| VENTS KSA | 100; 125; 150; 160; 200; 250; 315 | 2, 4 | E – single-phase | R – equipped with the power cord and plug; U – speed controller module with the built in temperature sensor; Un – speed controller module with the external temperature sensor; U1 – speed controller with the built in timer and temperature sensor; U1n – speed controller with the built in timer and external temperature sensor. |

Accessories



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Technical data:

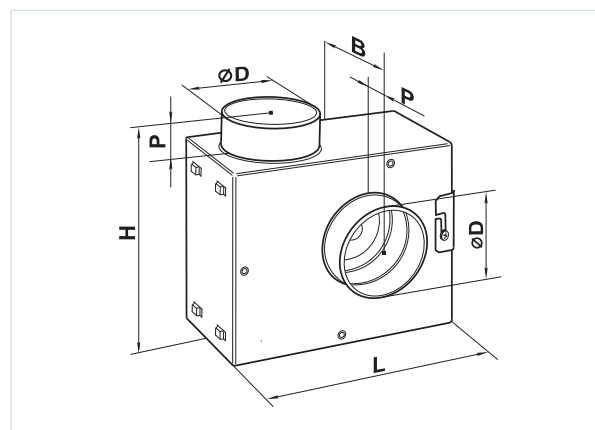
| | KSA 100-2E | KSA 125-2E | KSA 150-2E |
|------------------------------------|------------|------------|------------|
| Voltage [V / 50 Hz] | 230 | 230 | 230 |
| Power [W] | 115 | 120 | 260 |
| Current [A] | 0,51 | 0,52 | 1,16 |
| Maximum air flow [m³/h] | 400 | 530 | 730 |
| RPM [min⁻¹] | 2650 | 2650 | 2600 |
| Noise level at 3 m [dBA] | 36,1 | 38,3 | 39,4 |
| Maximum operating temperature [°C] | -25 +40 | -25 +40 | -25 +40 |
| Protection rating | IPX4 | IPX4 | IPX4 |

Technical data:

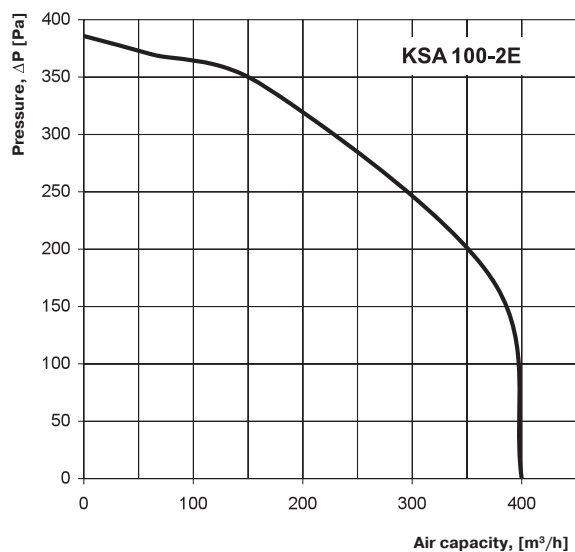
| | KSA 160-2E | KSA 200-4E | KSA 250-4E | KSA 315-4E |
|------------------------------------|------------|------------|------------|------------|
| Voltage [V / 50 Hz] | 230 | 230 | 230 | 230 |
| Power [W] | 260 | 110 | 395 | 570 |
| Current [A] | 1,16 | 0,45 | 1,98 | 2,48 |
| Maximum air flow [m³/h] | 730 | 850 | 1500 | 2140 |
| RPM [min⁻¹] | 2600 | 1300 | 1330 | 1325 |
| Noise level at 3 m [dBA] | 37,9 | 29,1 | 35,5 | 43,7 |
| Maximum operating temperature [°C] | -25 +40 | -25 +40 | -25 +40 | -40 +55 |
| Protection rating | IPX4 | IPX4 | IPX4 | IPX4 |

Fan overall dimensions:

| Type | Dimensions [mm] | | | | | Mass [kg] |
|------------|-----------------|-----|-----|-----|----|-----------|
| | ØD | B | H | L | P | |
| KSA 100-2E | 99 | 184 | 308 | 310 | 48 | 4,22 |
| KSA 125-2E | 123 | 204 | 308 | 310 | 48 | 4,57 |
| KSA 150-2E | 148 | 231 | 343 | 358 | 48 | 6,28 |
| KSA 160-2E | 158 | 231 | 343 | 358 | 48 | 6,28 |
| KSA 200-4E | 198 | 282 | 408 | 445 | 48 | 8,25 |
| KSA 250-4E | 248 | 330 | 500 | 525 | 48 | 10,50 |
| KSA 315-4E | 314 | 392 | 495 | 535 | 48 | 17,0 |

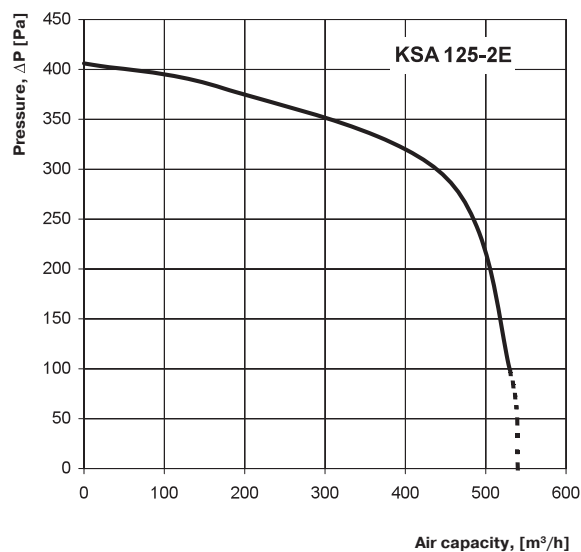


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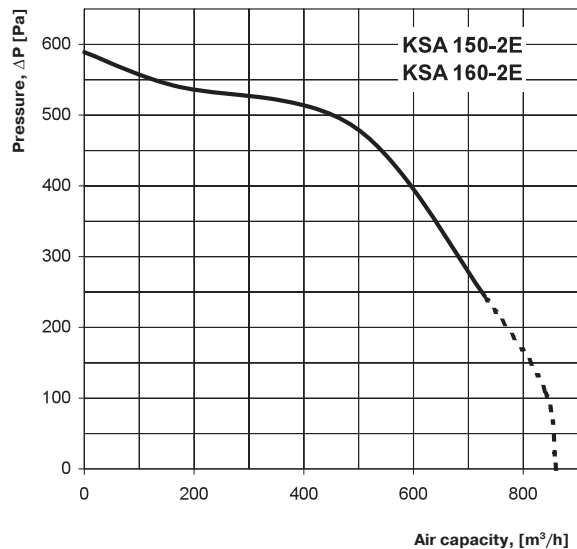
| Sound-power level | Octave-frequency band [Hz] | | | | | | | | | |
|-------------------------|----------------------------|-----|----|-----|-----|-----|------|------|------|------|
| | Hz | Gen | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| L_{WA} to inlet | dBA | 47 | 44 | 41 | 42 | 37 | 35 | 35 | 30 | 29 |
| L_{WA} to outlet | dBA | 50 | 45 | 41 | 41 | 37 | 35 | 31 | 30 | 28 |
| L_{WA} to environment | dBA | 43 | 39 | 36 | 37 | 31 | 30 | 28 | 25 | 22 |

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| Sound-power level | Octave-frequency band [Hz] | | | | | | | | | |
|-------------------------|----------------------------|-----|----|-----|-----|-----|------|------|------|------|
| | Hz | Gen | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| L_{WA} to inlet | dBA | 48 | 45 | 44 | 46 | 37 | 39 | 33 | 30 | 25 |
| L_{WA} to outlet | dBA | 50 | 45 | 43 | 47 | 39 | 39 | 33 | 29 | 27 |
| L_{WA} to environment | dBA | 45 | 40 | 39 | 41 | 34 | 33 | 27 | 23 | 22 |

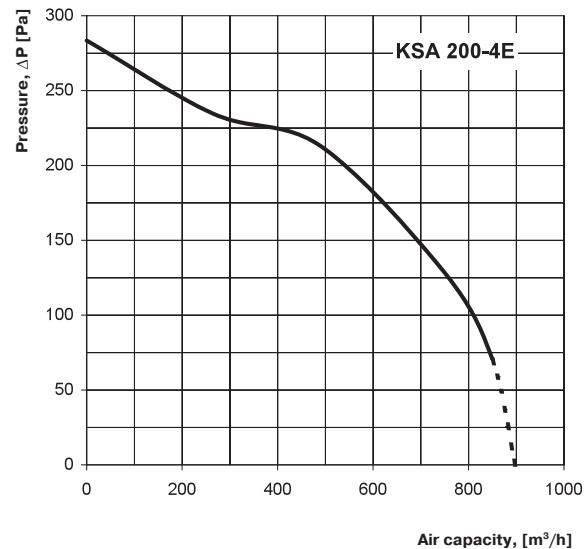
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| KSA 150-2E | | | | | | | | | | |
|-------------------------|----------------------------|-----|----|-----|-----|-----|------|------|------|------|
| Sound-power level | Octave-frequency band [Hz] | | | | | | | | | |
| | Hz | Gen | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| L_{WA} to inlet | dBA | 55 | 42 | 52 | 50 | 40 | 35 | 28 | 25 | 21 |
| L_{WA} to outlet | dBA | 55 | 43 | 51 | 48 | 40 | 34 | 29 | 23 | 23 |
| L_{WA} to environment | dBA | 50 | 39 | 48 | 44 | 35 | 30 | 25 | 20 | 17 |

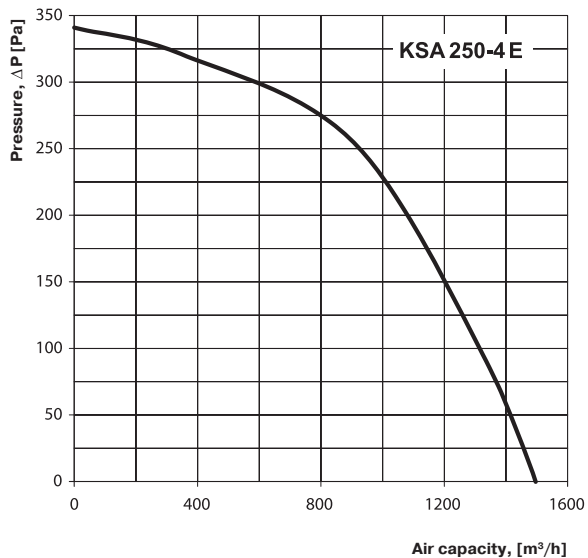
| KSA 160-2E | | | | | | | | | | |
|-------------------------|----------------------------|-----|----|-----|-----|-----|------|------|------|------|
| Sound-power level | Octave-frequency band [Hz] | | | | | | | | | |
| | Hz | Gen | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| L_{WA} to inlet | dBA | 56 | 44 | 51 | 48 | 38 | 33 | 29 | 24 | 22 |
| L_{WA} to outlet | dBA | 54 | 42 | 51 | 50 | 37 | 31 | 30 | 25 | 25 |
| L_{WA} to environment | dBA | 49 | 37 | 47 | 43 | 34 | 28 | 25 | 20 | 18 |

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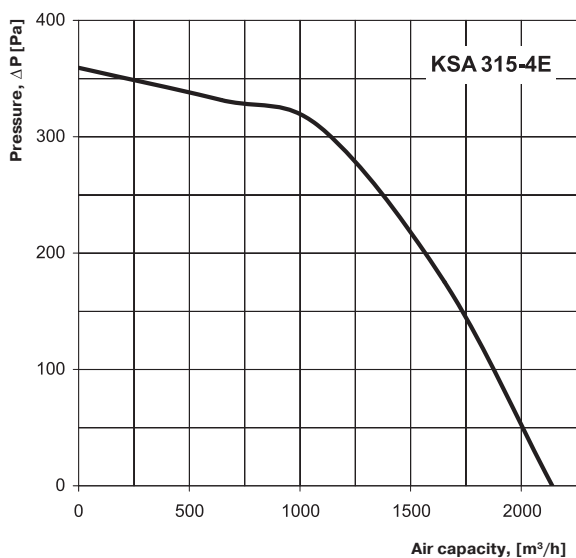
| Sound-power level | Octave-frequency band [Hz] | | | | | | | | | |
|-------------------------|----------------------------|-----|----|-----|-----|-----|------|------|------|------|
| | Hz | Gen | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| L_{WA} to inlet | dBA | 43 | 39 | 38 | 38 | 31 | 29 | 20 | 17 | 14 |
| L_{WA} to outlet | dBA | 43 | 36 | 38 | 34 | 34 | 27 | 23 | 18 | 18 |
| L_{WA} to environment | dBA | 38 | 33 | 35 | 31 | 27 | 22 | 16 | 13 | 11 |

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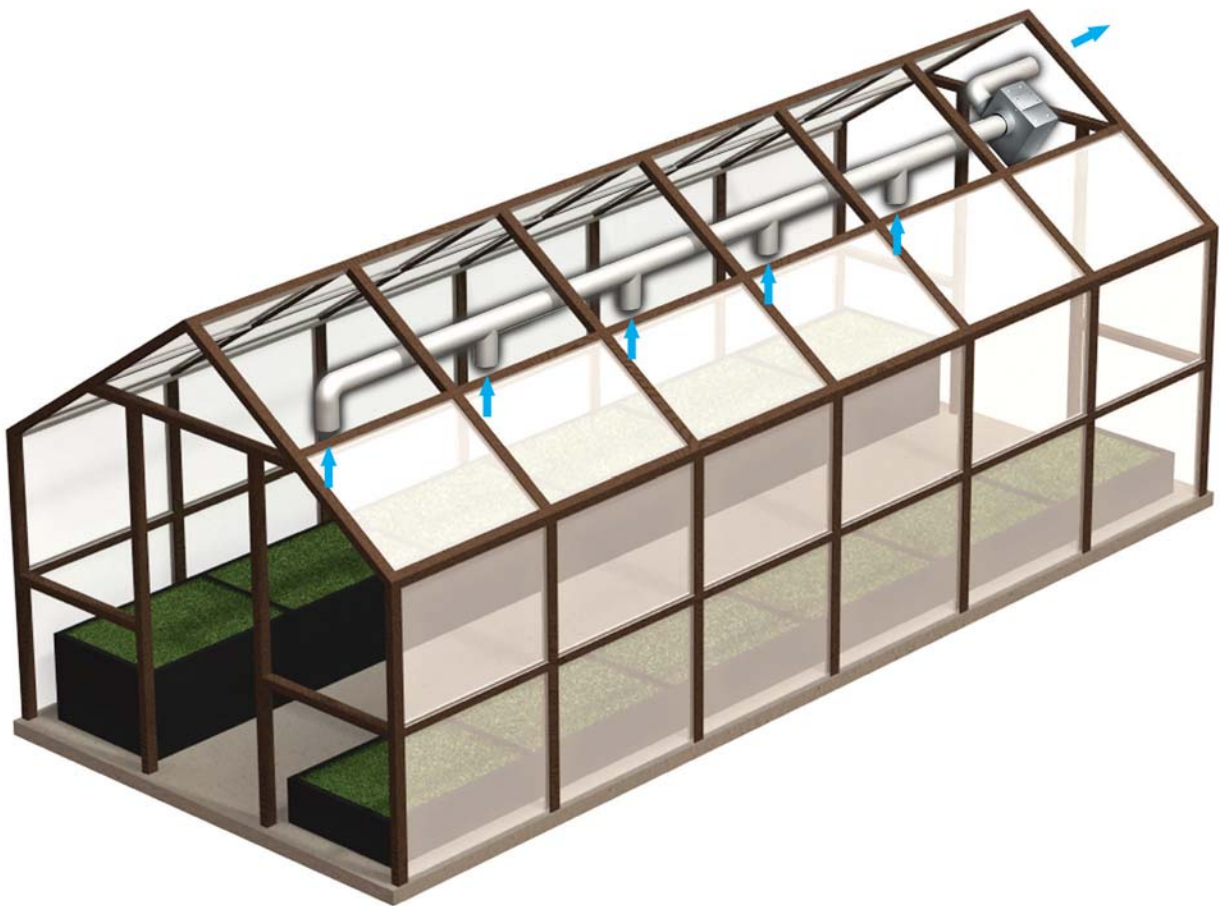


| Sound-power level | | Octave-frequency band [Hz] | | | | | | | | | |
|-------------------------|-----|----------------------------|----|-----|-----|-----|------|------|------|------|--|
| | Hz | Gen | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| L_{WA} to inlet | dBA | 44 | 41 | 43 | 40 | 32 | 24 | 27 | 24 | 21 | |
| L_{WA} to outlet | dBA | 46 | 41 | 45 | 38 | 32 | 26 | 29 | 22 | 18 | |
| L_{WA} to environment | dBA | 41 | 35 | 38 | 33 | 27 | 21 | 24 | 18 | 15 | |

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| Sound-power level | | Octave-frequency band [Hz] | | | | | | | | | |
|-------------------------|-----|----------------------------|----|-----|-----|-----|------|------|------|------|--|
| | Hz | Gen | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| L_{WA} to inlet | dBA | 45 | 41 | 42 | 39 | 29 | 25 | 25 | 27 | 25 | |
| L_{WA} to outlet | dBA | 48 | 43 | 46 | 40 | 35 | 26 | 30 | 20 | 19 | |
| L_{WA} to environment | dBA | 44 | 36 | 39 | 31 | 25 | 22 | 25 | 18 | 17 | |



KSA fan greenhouse ventilation example