

# MIETZSCH

GmbH Lufttechnik Dresden

**USER INFORMATION**

## **DUCT FANS**

### **VRK-EC SERIES**

**with electronically commutated (EC) motor**



# Duct fans

## VRK-EC series

Application in the exhaust technology of all industrial sectors

High chemical resistance through use of plastics and motor outside of the flow

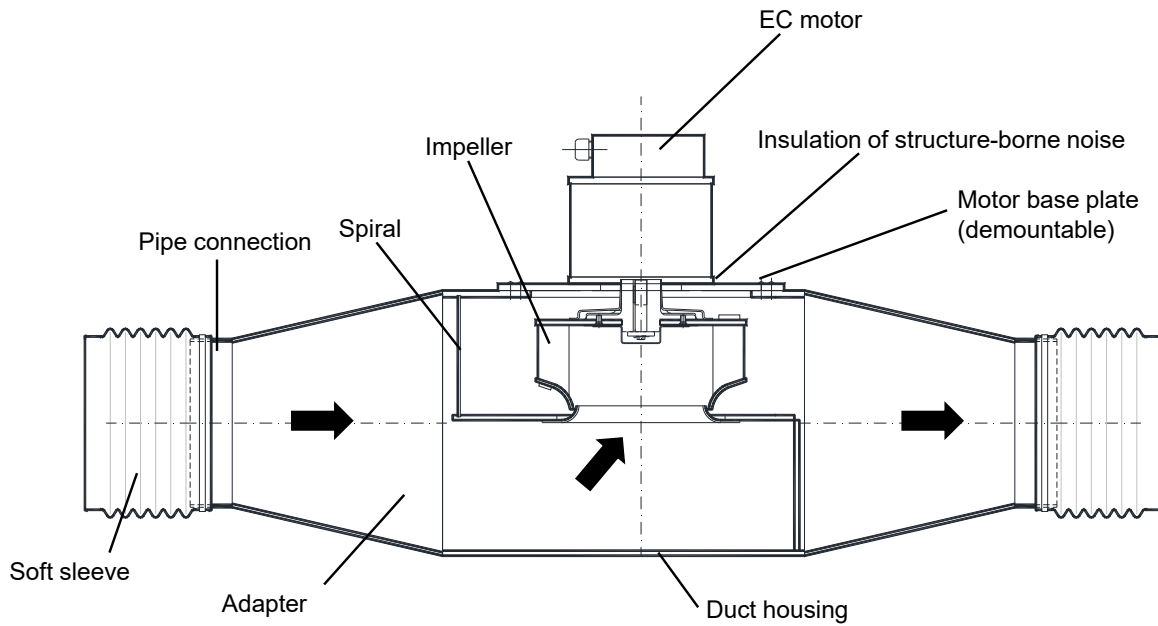
Electronically commuted motor (EC motor with integrated EC controller)

Low space requirements and universal mounting

Volumetric flow rate	up to 5,000 m <sup>3</sup> /h
Pressure increase	up to 1,330 Pa

Performance scaling using 4 sizes (larger types on request)

Extensive range of electrical and ventilation accessories



### APPLICATION

The VRK duct fans are used in all sectors of industry and agriculture. They are an easy to install alternative to common centrifugal fans with complex directional changes wherever ordinary axial fans do not offer sufficient power or, in particular, where straight running lines are required to save space.

VRK fans are highly resistant to corrosion and are thus preferred for applications such as extraction of process gases in the chemical/pharmaceutical industry as well as ventilation of laboratories, battery rooms, pickling baths, scrubbers, electroplating units and agricultural facilities, etc.

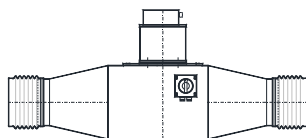
### TECHNICAL DESCRIPTION

Standard duct fans consist of the main components impeller, duct housing with integrated spiral, and adapters with pipe connection. Soft sleeves are included in the scope of delivery. The motor is positioned outside of the flow and insulated from vibrations. Electronically commuted motors (EC motor with integrated EC controller) are used. Motor protection is integrated into the motor (fault signal relay, open in case of fault, max. 2A-250VAC). The motor has its own 10V power source, which can handle a max. of 10 mA (e.g. from a potentiometer > 1kΩ). The rotation speed is controlled via a 0-10VDC control input. The EMV fault signal complies with EN 61000-6-4 (industrial sector).

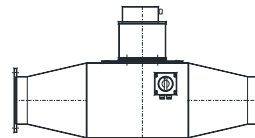
The impeller with balancing quality G 6.3 as per ISO 1940 is mounted directly on the motor shaft end. Rubber elements between the motor and the motor base plate prevent transfer of noise and vibrations.

Impeller and housing made of PPs (PVC on request) are made from individual parts using modern joining technologies. Steel parts such as screws, hub and hub connection are protected from corrosion by means of plastic covers or, alternatively, connecting elements made of resistant steel are used.

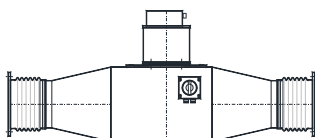
To accommodate numerous mounting requirements, 4 different connection types are available:



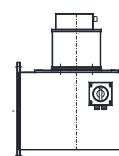
**Standard version ELA**  
with pipe connection and soft sleeves



**Version FF**  
with flange

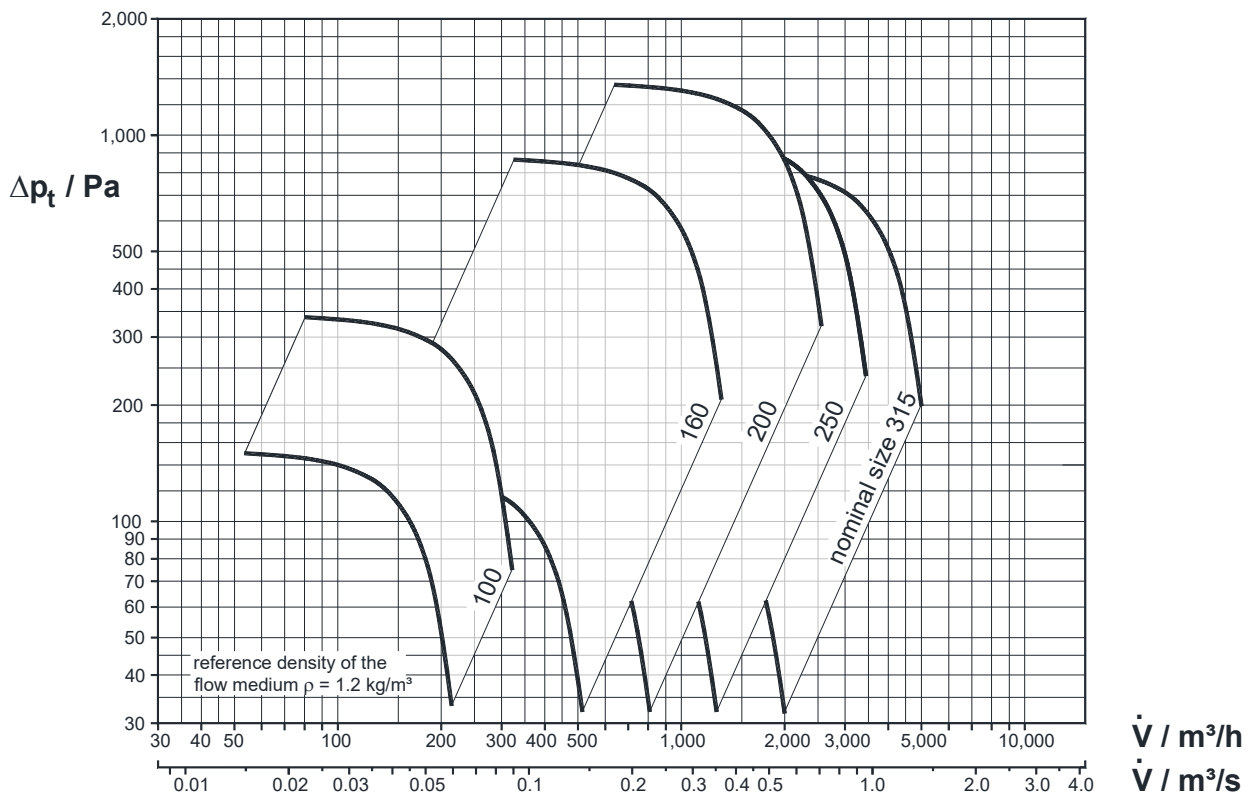


**Version KOF / KOR**  
with compensator and flange/frame



**Version RR**  
with (square) frame, with compensator,  
without adapters

### TYPE OVERVIEW – PRESELECTION



### OPERATING CONDITIONS

perm. ambient temperature:  $-25 \text{ }^\circ\text{C} \dots 40 \text{ }^\circ\text{C}$

perm. temperature of flow:  $-30 \text{ }^\circ\text{C} \dots 40 \text{ }^\circ\text{C}$

Higher temperatures are only permissible for certain sizes, materials and rotation speeds and only after consultation with the manufacturer.

The materials used provide good **resistance** to many **chemicals**. Nevertheless, even plastics are susceptible to attack by certain substances. In many application fields, such as in laboratories, chemical stores, agricultural facilities and moisture-laden processes etc., good results have been achieved with “standard materials” such as PVC or PPs, which can generally be used without problems.

Critical applications include, for example, process engineering fields such as surface finishing, pickling units, process exhaust air in microelectronics etc.

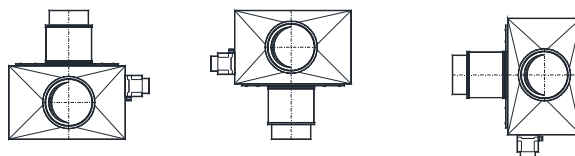
**To select the right material, the intended use of the fan and the type of medium must always be stated in requests for quotation or orders.**

**Media containing small amounts of dust particles** can also be conveyed; however, increased wear is to be expected.

**Work area:** The fans work stably in the entire depicted characteristic curve.

### INSTALLATION / MAINTENANCE

A duct fan is preferably installed into a horizontal pipeline whereby the motor can be located at the top or at the bottom. It can also be installed on the side if the casing is designed accordingly.



Consult the manufacturer in case of a horizontal motor axle or vertical fan positioning.

For mounting, the duct casing is placed on two wall or ceiling brackets with sound insulation. Connect the intake and outlet lines via flexible connections (included in the scope of delivery). A flange connection is also possible, if desired. The connected system components must not exert any mechanical loads on the fan.

If necessary, connect a condensate drainage line to the corresponding bore hole at the lowest point of the casings.

Cooling of the motor must not be impaired by adjacent components and ceilings. If installed outdoors, the motor, in particular, must be protected against direct exposure to the elements, e.g. ice, snow and hail (optional extra: weather protection).

The casing can be opened on the motor side for cleaning and repair. A condensate drain can also be installed (accessories).

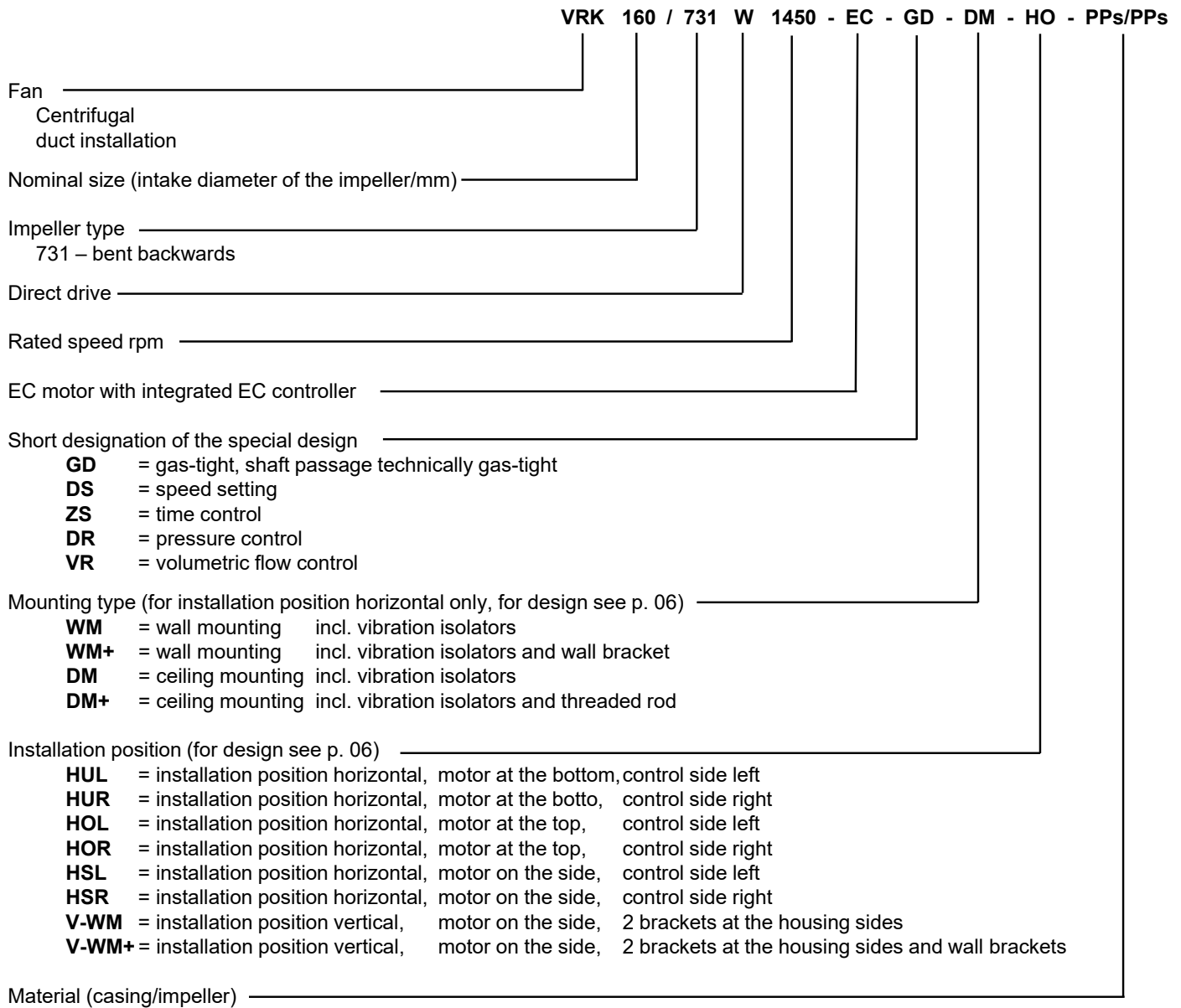
# Plastic duct fans

## VRK-EC series

Designation



### EXPLANATIONS OF THE TYPE DESIGNATION



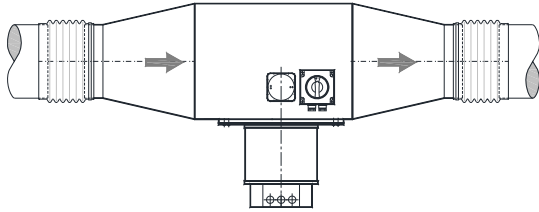
# Plastic duct fans VRK-EC series

## Installation position and type of installation

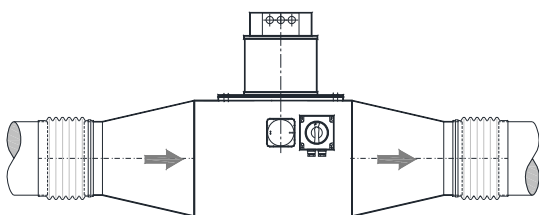
### INSTALLATION POSITION <sup>2)</sup>

#### horizontal

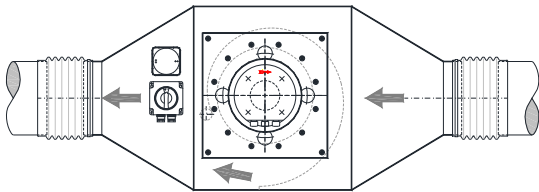
- HUR** <sup>1)</sup> Motor at bottom, control side right (see fig.)
- HUL** <sup>1)</sup> Motor at bottom, control side left



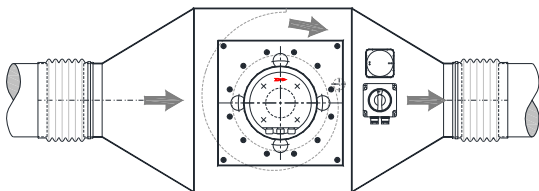
- HOR** Motor at top, control side right (see fig.)
- HOL** Motor at top, control side left



- HSL** Motor on the side, control side left (see fig.)

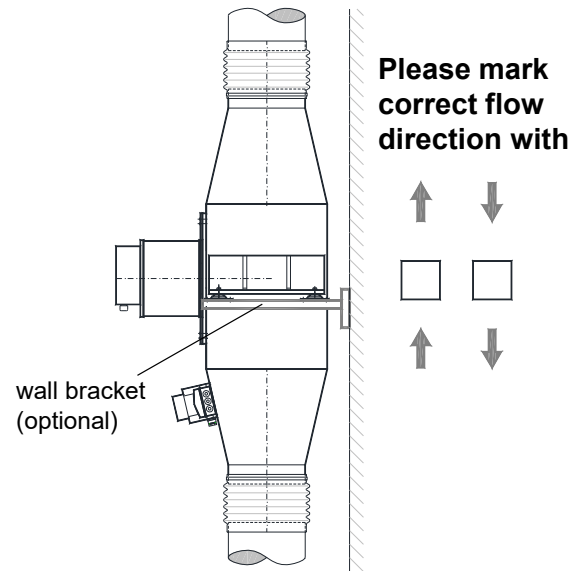


- HSR** Motor on the side, control side right (see fig.)



#### vertical with wall mounting WM only (incl. vibration isolators)

- V - WM**
- V - WM+** incl. wall bracket



### MOUNTING TYPE horizontal <sup>2)</sup>

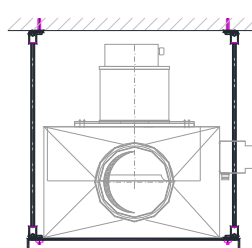
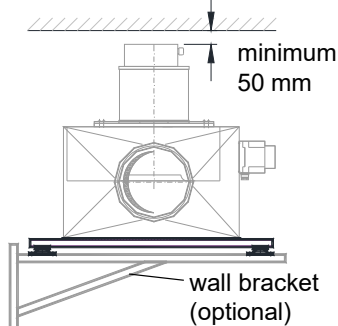
For all options „Installation position horizontal“  
(including metal rails and vibration isolators)

#### Wall mounting

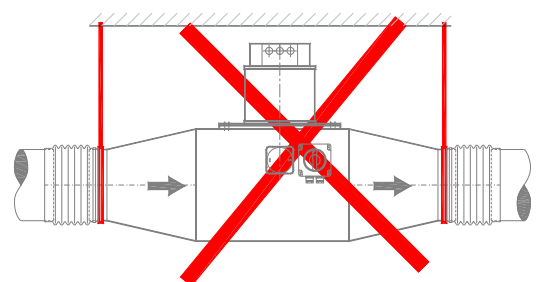
- WM** (on exist. wall bracket)
- WM+** incl. wall bracket

#### Ceiling mounting

- DM** (with exist. threaded rod)
- DM+** incl. threaded rod



Suspend using the duct part of the casing only!

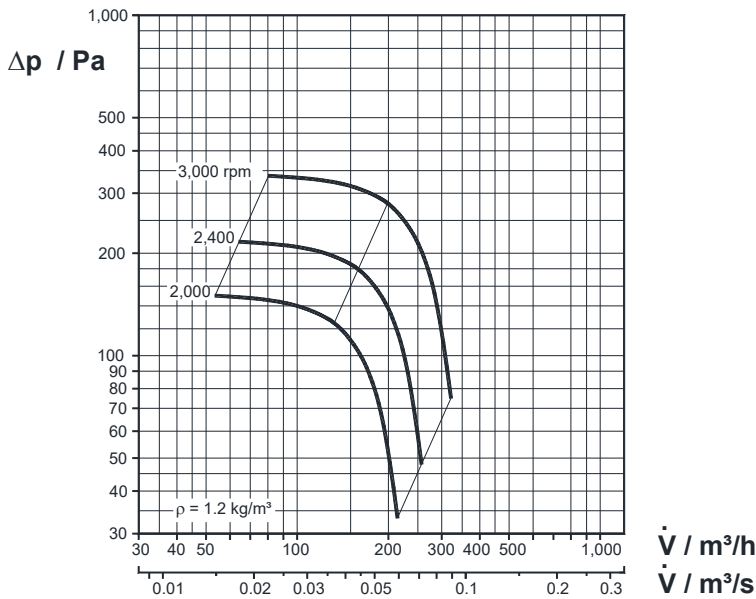


### OUTDOOR INSTALLATION

- yes** (with weather protection for motor)
- no**

1) Condensate drain required at „motor in bottom position“  
2) If a repair switch is required: Please inform us exactly of any deviating position

### PERFORMANCE DIAGRAM



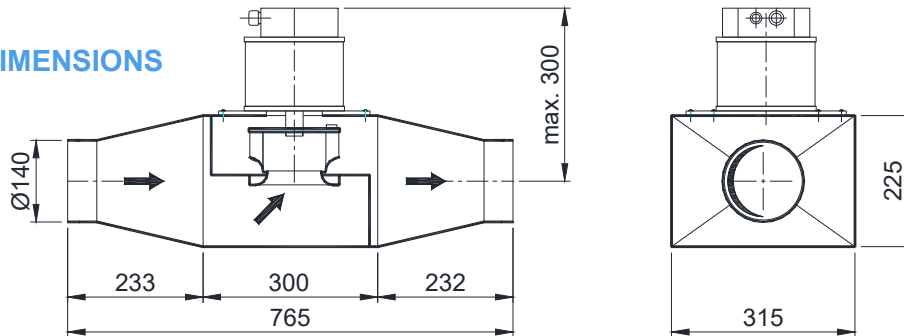
### WORK AREA

- Stable operation in the entire characteristic curve range
- Parallel connection is possible
- Can be controlled 100 % via the EC controller that is integrated into the motor
- Permissible temperature -25°C ... 40°C

### DESIGN FEATURES

- Welded impeller with 8 backward curved blades
- stable, welded plastic casing
- Motor outside of the flow
- Various installation positions and mounting options
- Various casing connections

### MAIN DIMENSIONS



### MODELS

#### VRK100/731-EC

#### standard model

Operation with maximum speed, with external 0-10V signal or via an external potentiometer POT10K, O/O switch

#### VRK100/731-EC-DS

#### speed setting

Speed setting with potentiometer installed on the fan, O/O switch

#### VRK100/731-EC-ZS

#### time control

Control unit for basic and on-demand ventilation, timer with daily and weekly programme  
MANUAL/AUTO switching

#### VRK100/731-EC-DR

#### pressure control

With pressure sensor, pressure transmitter and pressure controller, external control of a second target value  
Start/Stop switch, manual/normal mode

#### VRK100/731-EC-VR

#### volumetric flow control

For orifice gauge (separate), with pressure transmitter and flow controller, external control of a second target value  
Start/Stop switch, manual/normal mode

### MOTOR / MOTOR PROTECTION

- Electronically commuted external rotor motor (EC motor with integrated EC controller)
- Motor protection is integrated into the motor (fault signal relay, open in case of fault, max. 2A-250VAC)
- Input 0-10VDC, power source 10V max. 10 mA (for potentiometer > 1kΩ)
- EMV fault signal as per EN 61000-6-4 (industrial sector)

### PERFORMANCE DATA

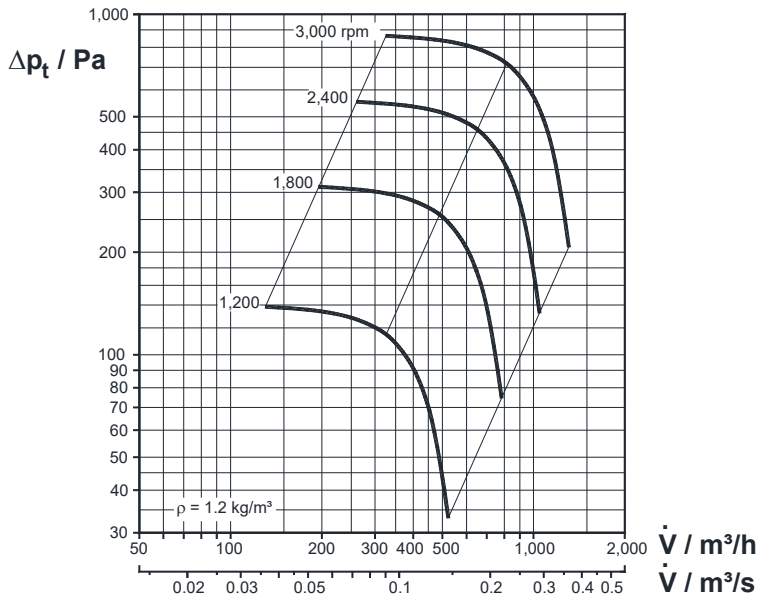
fan type	motor type	speed rpm	nominal current A	electrical power kW	weight kg	L <sub>A3m</sub> dB(A)	L <sub>WA</sub> dB(A)	L <sub>WA-Okt</sub> / dB(A)							
								63	125	250	500	1000	2000	4000	8000
VRK 100/731 W3000-EC	<b>EC-Motor</b>														
	rated voltage	2,000			5.3	47	66	46	51	61	59	59	57	47	39
	1~230 V/50 Hz	2,400				48	67	48	55	62	61	60	56	47	38
	IP 55	3,000	2.20	0.038		52	69	53	61	63	64	62	56	47	37

L<sub>A3m</sub> = A - weighted sound pressure level at distance of 3 m from fan center

L<sub>WA</sub> = A - weighted sound power level in duct

L<sub>WA-Okt</sub> = A - weighted octave-band sound power level in duct

### PERFORMANCE DIAGRAM



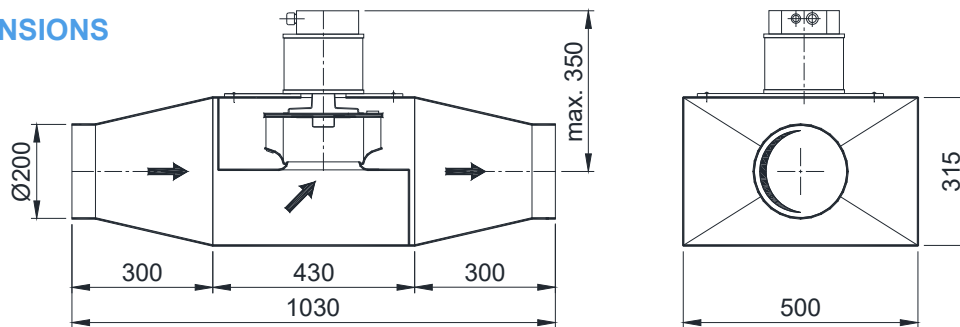
### WORK AREA

- Stable operation in the entire characteristic curve range
- Parallel connection is possible
- Can be controlled 100 % via the EC controller that is integrated into the motor
- Permissible temperature -25°C ... 40°C

### DESIGN FEATURES

- Welded impeller with 8 backward curved blades
- stable, welded plastic casing
- Motor outside of the flow
- Various installation positions and mounting options
- Various casing connections

### MAIN DIMENSIONS



### MODELS

- VRK160/731-EC** **standard model**  
Operation with maximum speed, with external 0-10V signal or via an external potentiometer POT10K, O/O switch
- VRK160/731-EC-DS** **speed setting**  
Speed setting with potentiometer installed on the fan, O/O switch
- VRK160/731-EC-ZS** **time control**  
Control unit for basic and on-demand ventilation, timer with daily and weekly programme  
MANUAL/AUTO switching
- VRK160/731-EC-DR** **pressure control**  
With pressure sensor, pressure transmitter and pressure controller, external control of a second target value  
Start/Stop switch, manual/normal mode
- VRK160/731-EC-VR** **volumetric flow control**  
For orifice gauge (separate), with pressure transmitter and flow controller, external control of a second target value  
Start/Stop switch, manual/normal mode

### MOTOR / MOTOR PROTECTION

- Electronically commuted external rotor motor (EC motor with integrated EC controller)
- Motor protection is integrated into the motor (fault signal relay, open in case of fault, max. 2A-250VAC)
- Input 0-10VDC, power source 10V max. 10 mA (for potentiometer > 1kΩ)
- EMV fault signal as per EN 61000-6-4 (industrial sector)

### PERFORMANCE DATA

fan type	motor type	speed rpm	nominal current A	electrical power kW	weight kg	L <sub>A3m</sub> dB(A)	L <sub>WA</sub> dB(A)	L <sub>WA-Okt</sub> / dB(A)									
								63	125	250	500	1000	2000	4000	8000		
VRK 160/731 W3000-EC	<b>EC-Motor</b>	1,200	2.7	0.395	25.0	41	60	43	55	51	53	54	52	39	22		
	rated voltage	1,800						49	67	49	61	59	62	61	57	49	33
	1~230 V/50 Hz	2,400						56	74	55	65	65	72	67	61	55	44
	IP 55	3,000						61	79	58	67	69	78	71	63	60	51

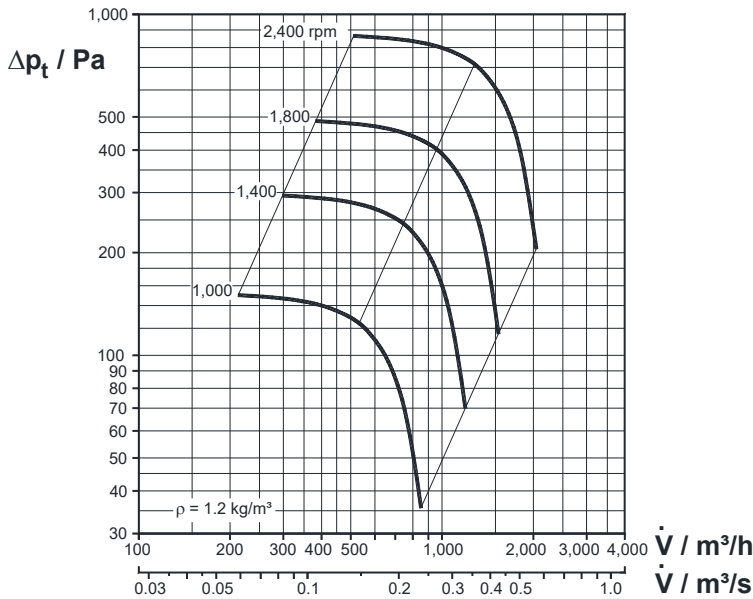
L<sub>A3m</sub> = A - weighted sound pressure level at distance of 3 m from fan center

L<sub>WA</sub> = A - weighted sound power level in duct

L<sub>WA-Okt</sub> = A - weighted octave-band sound power level in duct



### PERFORMANCE DIAGRAM



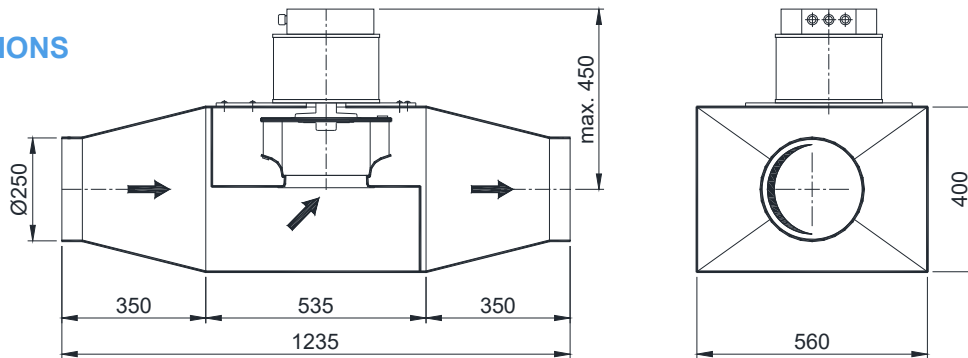
### WORK AREA

- Stable operation in the entire characteristic curve range
- Parallel connection is possible
- Can be controlled 100 % via the EC controller that is integrated into the motor
- Permissible temperature -25°C ... 40°C

### DESIGN FEATURES

- Welded impeller with 8 backward curved blades
- stable, welded plastic casing
- Motor outside of the flow
- Various installation positions and mounting options
- Various casing connections

### MAIN DIMENSIONS



### MODELS

- VRK200/731-EC** **standard model**  
Operation with maximum speed, with external 0-10V signal or via an external potentiometer POT10K, O/O switch
- VRK200/731-EC-DS** **speed setting**  
Speed setting with potentiometer installed on the fan, O/O switch
- VRK200/731-EC-ZS** **time control**  
Control unit for basic and on-demand ventilation, timer with daily and weekly programme  
MANUAL/AUTO switching
- VRK200/731-EC-DR** **pressure control**  
With pressure sensor, pressure transmitter and pressure controller, external control of a second target value  
Start/Stop switch, manual/normal mode
- VRK200/731-EC-VR** **volumetric flow control**  
For orifice gauge (separate), with pressure transmitter and flow controller, external control of a second target value  
Start/Stop switch, manual/normal mode

### MOTOR / MOTOR PROTECTION

- Electronically commuted external rotor motor (EC motor with integrated EC controller)
- Motor protection is integrated into the motor (fault signal relay, open in case of fault, max. 2A-250VAC)
- Input 0-10VDC, power source 10V max. 10 mA (for potentiometer > 1kΩ)
- EMV fault signal as per EN 61000-6-4 (industrial sector)

### PERFORMANCE DATA

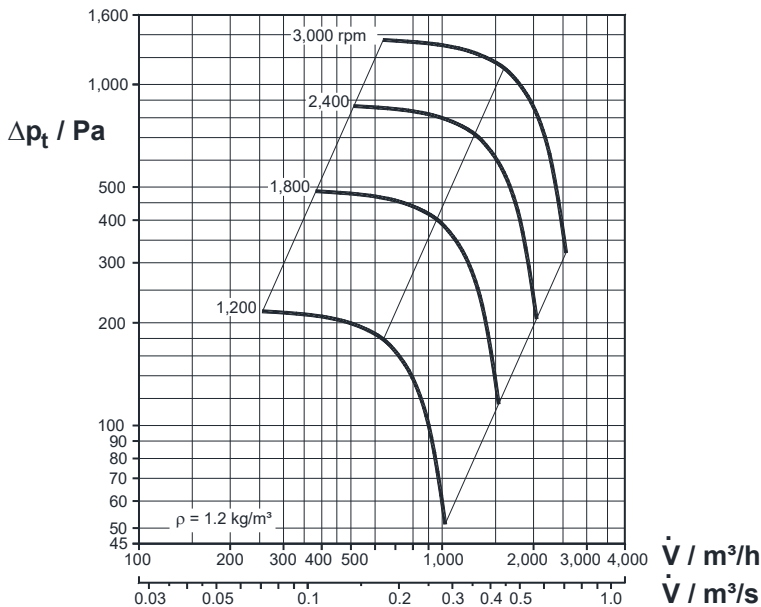
fan type	motor type	speed rpm	nominal current A	electrical power kW	weight kg	L <sub>A3m</sub> dB(A)	L <sub>WA</sub> dB(A)	L <sub>WA-Okt</sub> / dB(A)									
								63	125	250	500	1000	2000	4000	8000		
VRK 200/731 W2400-EC	<b>EC-Motor</b>	1,000	1.40	0.56	35.0	46	64	47	55	55	57	58	55	52	27		
	rated voltage	1,400						51	68	52	60	61	63	62	59	49	35
	3~400 V/50 Hz	1,800						55	74	56	64	66	69	67	63	55	42
	IP 55	2,400						60	79	59	67	70	75	72	66	59	48

L<sub>A3m</sub> = A - weighted sound pressure level at distance of 3 m from fan center

L<sub>WA</sub> = A - weighted sound power level in duct

L<sub>WA-Okt</sub> = A - weighted octave-band sound power level in duct

### PERFORMANCE DIAGRAM



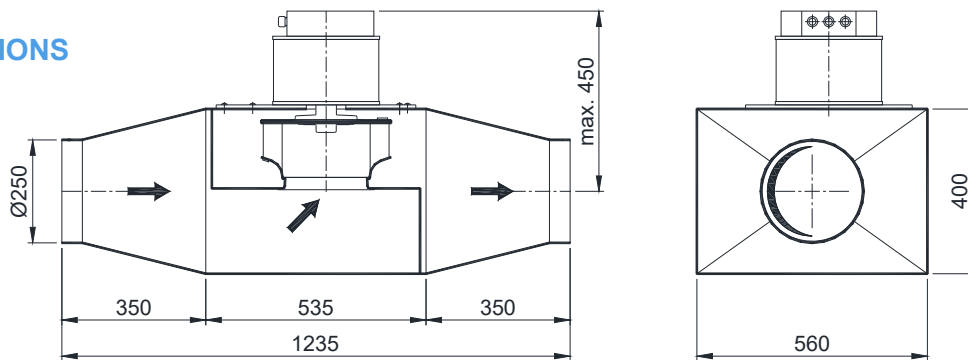
### WORK AREA

- Stable operation in the entire characteristic curve range
- Parallel connection is possible
- Can be controlled 100 % via the EC controller that is integrated into the motor
- Permissible temperature -25°C ... 40°C

### DESIGN FEATURES

- Welded impeller with 8 backward curved blades
- stable, welded plastic casing
- Motor outside of the flow
- Various installation positions and mounting options
- Various casing connections

### MAIN DIMENSIONS



### MODELS

- VRK200/731-EC** **standard model**  
Operation with maximum speed, with external 0-10V signal or via an external potentiometer POT10K, O/O switch
- VRK200/731-EC-DS** **speed setting**  
Speed setting with potentiometer installed on the fan, O/O switch
- VRK200/731-EC-ZS** **time control**  
Control unit for basic and on-demand ventilation, timer with daily and weekly programme  
MANUAL/AUTO switching
- VRK200/731-EC-DR** **pressure control**  
With pressure sensor, pressure transmitter and pressure controller, external control of a second target value  
Start/Stop switch, manual/normal mode
- VRK200/731-EC-VR** **volumetric flow control**  
For orifice gauge (separate), with pressure transmitter and flow controller, external control of a second target value  
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- EMV fault signal as per EN 61000-6-4 (industrial sector)

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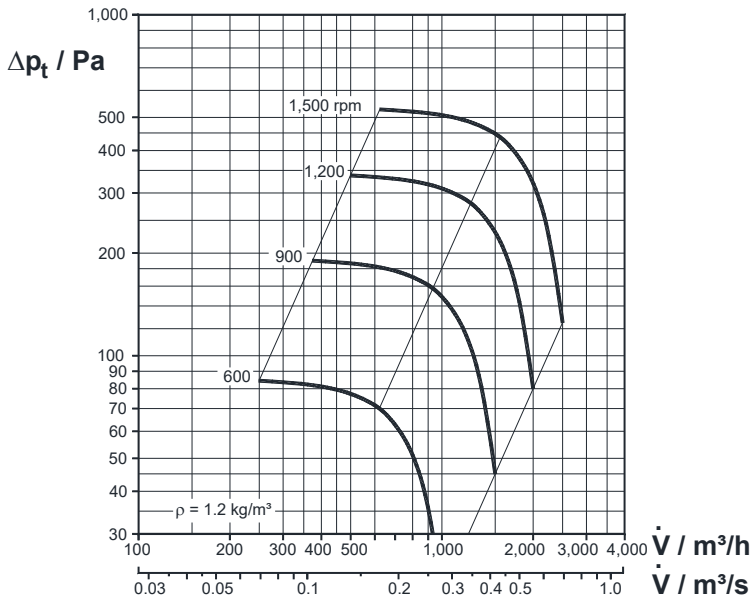
fan type	motor type	speed rpm	nominal current A	electrical power kW	weight kg	L <sub>A3m</sub> dB(A)	L <sub>WA</sub> dB(A)	L <sub>WA-Okt</sub> / dB(A)									
								63	125	250	500	1000	2000	4000	8000		
VRK 200/731 W3000-EC	<b>EC-Motor</b>	1,200	2.60	1.06	42.0	49	66	50	58	58	60	60	57	46	31		
	rated voltage	1,800						55	74	56	64	66	69	67	63	55	42
	3~400 V/50 Hz	2,400						62	81	60	69	72	77	74	67	61	50
	IP 55	3,000						68	86	62	71	76	83	79	70	65	56

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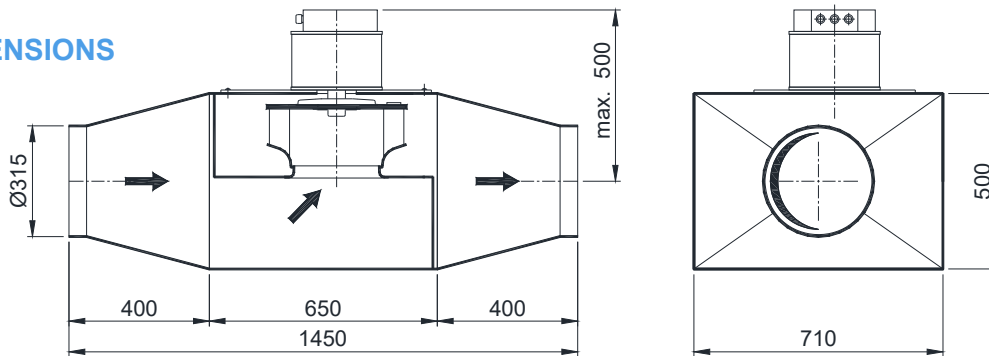
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- Parallel connection is possible
- Can be controlled 100 % via the EC controller that is integrated into the motor
- Permissible temperature -25°C ... 40°C

### DESIGN FEATURES

- Welded impeller with 8 backward curved blades
- stable, welded plastic casing
- Motor outside of the flow
- Various installation positions and mounting options
- Various casing connections

### MAIN DIMENSIONS



### MODELS

- VRK250/731-EC** **standard model**  
Operation with maximum speed, with external 0-10V signal or via an external potentiometer POT10K, O/O switch
- VRK250/731-EC-DS** **speed setting**  
Speed setting with potentiometer installed on the fan, O/O switch
- VRK250/731-EC-ZS** **time control**  
Control unit for basic and on-demand ventilation, timer with daily and weekly programme  
MANUAL/AUTO switching
- VRK250/731-EC-DR** **pressure control**  
With pressure sensor, pressure transmitter and pressure controller, external control of a second target value  
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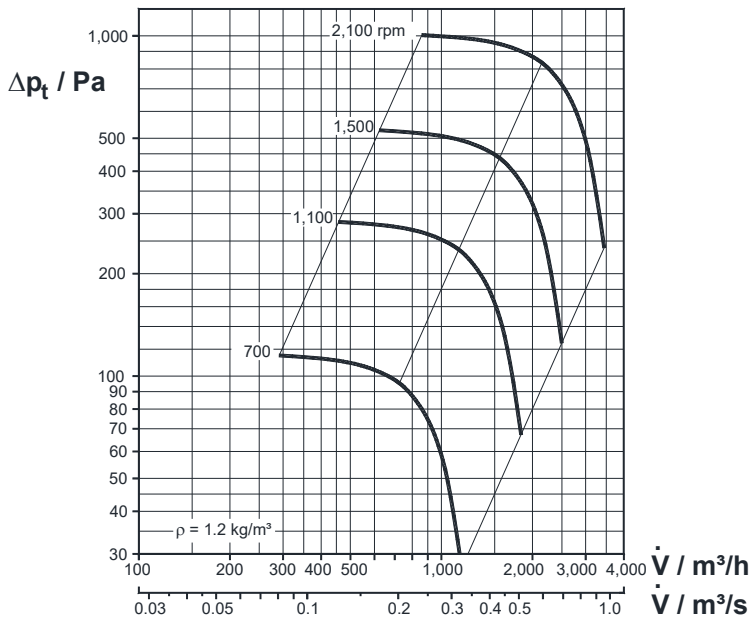
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								63	125	250	500	1000	2000	4000	8000
VRK 250/731 W1500-EC	<b>EC-Motor</b>	600			55.0	39	55	41	48	45	50	48	40	26	17
	rated voltage	900				46	63	50	55	55	57	59	52	43	27
	1~230 V/50 Hz	1,200				51	69	54	59	63	64	64	58	52	36
	IP 55	1,500	3.40	0.41		56	74	60	63	69	70	67	63	57	44

L<sub>A3m</sub> = A - weighted sound pressure level at distance of 3 m from fan center

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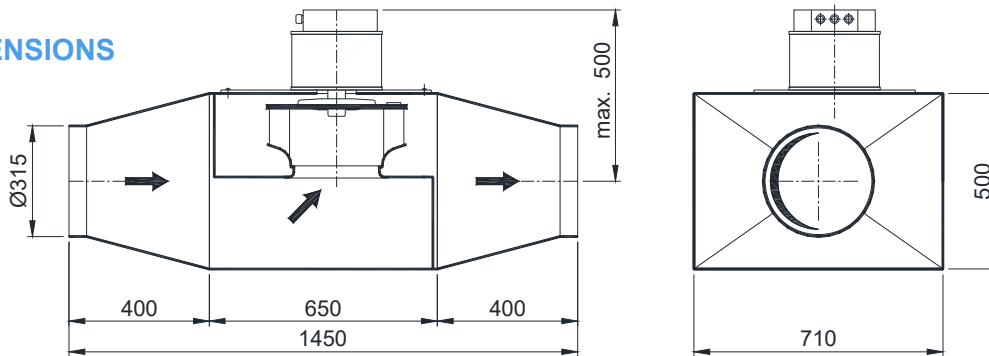
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- stable, welded plastic casing
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### MAIN DIMENSIONS



### MODELS

#### VRK250/731-EC

#### standard model

Operation with maximum speed, with external 0-10V signal or via an external potentiometer POT10K, O/O switch

#### VRK250/731-EC-DS

#### speed setting

Speed setting with potentiometer installed on the fan, O/O switch

#### VRK250/731-EC-ZS

#### time control

Control unit for basic and on-demand ventilation, timer with daily and weekly programme  
MANUAL/AUTO switching

#### VRK250/731-EC-DR

#### pressure control

With pressure sensor, pressure transmitter and pressure controller, external control of a second target value  
Start/Stop switch, manual/normal mode

#### VRK250/731-EC-VR

#### volumetric flow control

For orifice gauge (separate), with pressure transmitter and flow controller, external control of a second target value  
Start/Stop switch, manual/normal mode

### MOTOR / MOTOR PROTECTION

- Electronically commuted external rotor motor (EC motor with integrated EC controller)
- Motor protection is integrated into the motor (fault signal relay, open in case of fault, max. 2A-250VAC)
- Input 0-10VDC, power source 10V max. 10 mA (for potentiometer > 1kΩ)
- EMV fault signal as per EN 61000-6-4 (industrial sector)

### PERFORMANCE DATA

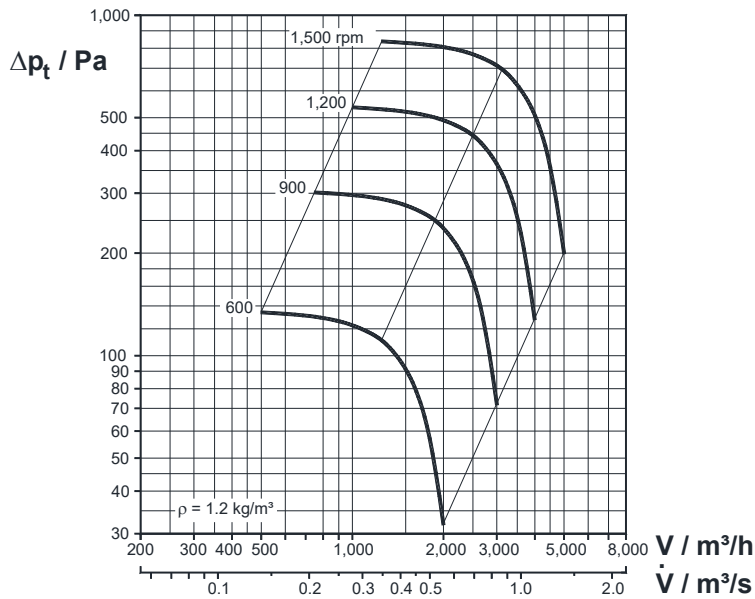
fan type	motor type	speed rpm	nominal current A	electrical power kW	weight kg	L <sub>A3m</sub> dB(A)	L <sub>WA</sub> dB(A)	L <sub>WA-Okt</sub> / dB(A)							
								63	125	250	500	1000	2000	4000	8000
VRK 250/731 W2100-EC	<b>EC-Motor</b>	700			59.0	42	59	46	53	50	55	52	44	30	21
	rated voltage	1,100				50	67	53	58	60	61	62	56	50	33
	3~400 V/50 Hz	1,500				56	74	60	63	69	70	67	63	57	44
	IP 55	2,100	2.60	1.11		61	79	65	68	74	75	72	68	61	48

L<sub>A3m</sub> = A - weighted sound pressure level at distance of 3 m from fan center

L<sub>WA</sub> = A - weighted sound power level in duct

L<sub>WA-Okt</sub> = A - weighted octave-band sound power level in duct

### PERFORMANCE DIAGRAM



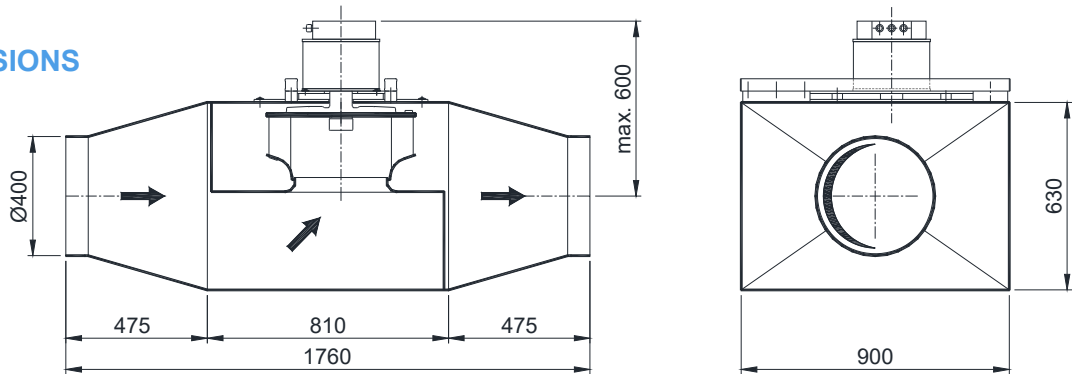
### WORK AREA

- Stable operation in the entire characteristic curve range
- Parallel connection is possible
- Can be controlled 100 % via the EC controller that is integrated into the motor
- Permissible temperature -25°C ... 40°C

### DESIGN FEATURES

- Welded impeller with 8 backward curved blades
- stable, welded plastic casing
- Motor outside of the flow
- Various installation positions and mounting options
- Various casing connections

### MAIN DIMENSIONS



### MODELS

- VRK315/731-EC** **standard model**  
Operation with maximum speed, with external 0-10V signal or via an external potentiometer POT10K, O/O switch
- VRK315/731-EC-DS** **speed setting**  
Speed setting with potentiometer installed on the fan, O/O switch
- VRK315/731-EC-ZS** **time control**  
Control unit for basic and on-demand ventilation, timer with daily and weekly programme  
MANUAL/AUTO switching
- VRK315/731-EC-DR** **pressure control**  
With pressure sensor, pressure transmitter and pressure controller, external control of a second target value  
Start/Stop switch, manual/normal mode
- VRK315/731-EC-VR** **volumetric flow control**  
For orifice gauge (separate), with pressure transmitter and flow controller, external control of a second target value  
Start/Stop switch, manual/normal mode

### MOTOR / MOTOR PROTECTION

- Electronically commuted external rotor motor (EC motor with integrated EC controller)
- Motor protection is integrated into the motor (fault signal relay, open in case of fault, max. 2A-250VAC)
- Input 0-10VDC, power source 10V max. 10 mA (for potentiometer > 1kΩ)
- EMV fault signal as per EN 61000-6-4 (industrial sector)

### PERFORMANCE DATA

fan type	motor type	speed rpm	nominal current A	electrical power kW	weight kg	L <sub>A3m</sub> dB(A)	L <sub>WA</sub> dB(A)	L <sub>WA-Okt</sub> / dB(A)							
								63	125	250	500	1000	2000	4000	8000
VRK 315/731 W1500-EC	<b>EC-Motor</b>	600			87.0	45	61	48	54	53	55	53	48	41	34
	rated voltage	900				52	70	58	63	64	65	63	59	54	43
	3~400 V/50 Hz	1,200				58	76	63	67	71	71	69	64	60	48
	IP 55	1,500	2.50	1.26		63	81	66	70	76	75	73	68	63	52

L<sub>A3m</sub> = A - weighted sound pressure level at distance of 3 m from fan center

L<sub>WA</sub> = A - weighted sound power level in duct

L<sub>WA-Okt</sub> = A - weighted octave-band sound power level in duct

# Plastic duct fans VRK-EC series

## Accessories



### CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimensional drawing therefore only cover the most frequently used casing connections and condensate drains.

The pressure and intake side connectors can be supplemented with safety screens.

### Condensate drain

Every fan has a condensate drill hole with a sealing cap at its lowest point. Various nozzles for installing a condensate hose are available on request.

Casing material: PPs, PVC

Screwed connection

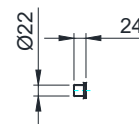
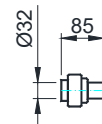
**KSV**

Nozzle

**KSS**

Drill hole

**KSB**



Ø14.5 mm

### Intake side casing connection

Casing material: PPs, PVC

Adapter with compensator + flange

**KOF**

**ELA**

Compensator with frame

**KOR**

Frame (rigid)

**R**

Frame (rigid)

**R**

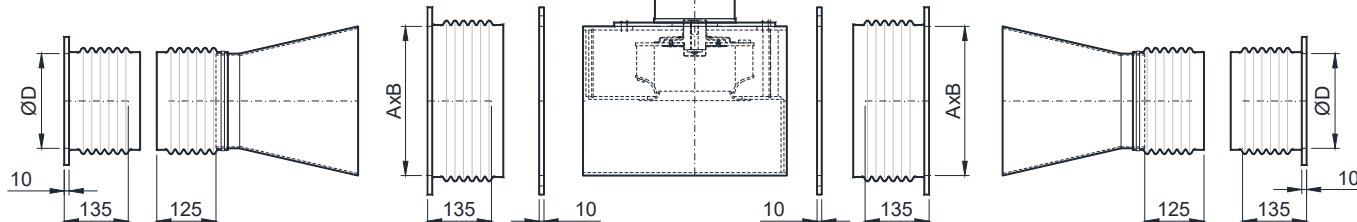
Compensator with frame

**KOR**

Adapter with compensator + flange

**ELA**

**KOF**



### Pressure side casing connection

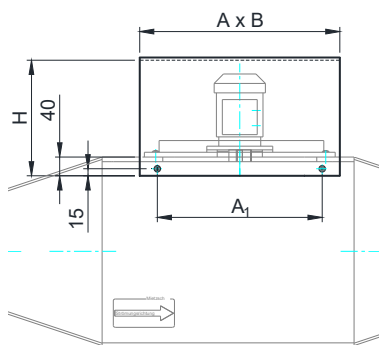
Casing material: PPs, PVC

### WEATHER PROTECTION WS for the MOTOR

By default, motors with protection level IP 55 are used, which are protected from hose water from all directions. When installing fans outside, additional weather protection against all types of weather should be installed.

### VRK 100..250 -...-H

Installation position horizontal

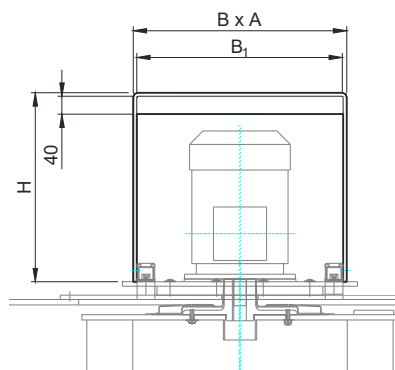


nominal size	dimensions			
	A	A <sub>1</sub>	B	H
VRK 100	280	220	317	300 / 350*
VRK 160	360	300	502	300 / 350*
VRK 200	425	350	562	350 / 400*
VRK 250	540	465	712	350

\*) for motors Exde

### VRK 315 -...-H

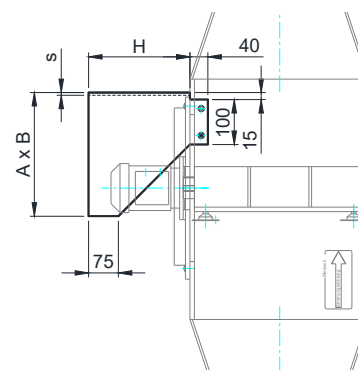
Installation position horizontal



nominal size	dimensions			
	A	B	B <sub>1</sub>	H
VRK 315	450	392	376	325

### VRK 100..250 -...-V

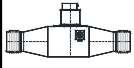
Installation position vertical



nominal size	dimensions		
	A	B	H
VRK 100	180	317	260
VRK 160	220	502	260
VRK 200	270	562	310
VRK 250	540	712	310

### REPAIR SWITCH RS

The RS switch is used to completely disconnect the fan from the grid for maintenance and repair work. This ensures there is no risk of accidents due to uncontrolled activation. The switch is delivered mounted and wired to the fan in accordance with the installation position.

Seq. no.	Qty	Object		Unit price EUR	Total price EUR	
		<p><b>Plastic duct fans</b>  <b>Mietzsch</b> Lufttechnik – VRK-EC series</p> <p>Object:</p> <p>Impeller optionally made of PVC / PPs welded, with balancing quality G 6.3 as per ISO 1940, mounted overhung on the motor shaft</p> <p>Balancing quality and vibration level of the fan comply with ISO 14694</p> <p>Welded duct casing with flow-optimised spiral optionally made of PVC / PPs  The casing can be opened on the motor side</p> <p>Line connection by default with welded on adaptors with <b>ELA</b> with pipe connection and soft sleeves  Model <b>FF</b> with flange  Model <b>KOF</b> compensator with flange  Model <b>KOR</b> compensator with frame  Model <b>RR</b> with (square) frame, without adapters</p> <p>Direct drive with EC motor with integrated EC controller, motor outside of the flow  Motor protection is integrated into the motor (fault signal relay, open in case of fault, max. 2A-250VAC)  Input 0-10VDC, power source 10V max. 10 mA (for potentiometer &gt; 1kΩ)  EMV fault signal as per EN 61000-6-4 (industrial sector)</p> <p>Safety requirements as per VDMA 24 167</p> <p><b>VRK</b> _____ / <b>731 W</b> _____ - <b>EC</b> - _____ - _____ - _____ - _____</p> <p>Nominal size _____  Rated speed _____  EC motor with integrated EC controller _____  Special model _____  Mounting type _____  Installation position _____  Material _____</p> <p>Volumetric flow rate : _____ m<sup>3</sup>/h  Total pressure increase : _____ Pa  Temperature of  Flow medium : _____ °C  Motor power : _____ kW  Voltage / frequency : _____ V _____ Hz  Rated motor current : _____ A  Fan speed : _____ rpm  Noise level L<sub>A3m</sub> : _____ dB(A)  Weight : _____ kg</p> <p><b>Flow medium/intended use:</b></p> <p><b>Accessories and special equipment</b></p> <ul style="list-style-type: none"> <li>◆ Condensate drain: Drill hole with seal / nozzle with cap or screw cap</li> <li>◆ Weather protection for the motor</li> <li>◆ Repair switch: loose / mounted, 3-pole with auxiliary contact</li> <li>◆ Engine protection switch: loose / mounted</li> <li>◆ Wall bracket / ceiling bracket for mounting</li> <li>◆ Miscellaneous</li> </ul>				

## Our program of products and services

### Roof fans

of all-plastic design, horizontally or vertically blowing out with many assembly accessories

### Radial fans

of thermoplastic material and FRP, direct and belt driven up to about 150 000 m<sup>3</sup>/h and 6 500 Pa

### Special fans

duct fans, built-in devices, mobile radial fans, Venturi injectors

### Explosion-proof fans

according to ATEX for zone 1 and zone 2

### Air technology systems and components

pipes, ducts, fittings, flaps, gas-tight shutoff flaps, exhaust air hoods, deflector hoods, suction hoods and many more of plastic material, complete air technology systems for industry and craft, air cleaning plants, laboratory and process exhaust systems

### Central ventilation systems

in housing construction, special-purpose fans, exhaust elements, controlling and regulating devices

### Noise protection

rectangular and cylindrical sound attenuators, silencing casings in corrosion-proof design

### Exhaust gas cleaning

droplet eliminators and moisteners, gas scrubbers for separation of gaseous dangerous substances, dust filter

### Heat exchangers

for heat recovery from moist and aggressive exhaust air

### Tanks

of thermoplastic material for liquids endangering water, according to water resources regulations

### Controlling and regulating elements and systems

switches, motor protection devices, speed controllers, frequency inverter, fan controls, flow supervision

### Special designs

devices, linings, special components etc. of plastic material

### Engineering performances

planning, calculation, and design, ventilation measurement on standardized test stands, low and high temperature test in company-own climatic test chambers

