



Extraction systems and Ventilators

Safety cabinets should be connected to an industrial exhaust air system in order to prevent harmful vapours from escaping into the working space. Attaching a ventilator to a safety cabinet for flammable liquids or flammable gases represents an equipment combination. As Zone 2 equipment, the ventilator must fulfil the requirements of the EC Directive 94/9/EC (ATEX) equipment group II, category 3 G.

ATEX Directive 94/9/EC

According to the BetrSichV (safety regulations), work equipment for use in potentially explosive areas must comply with the minimum requirements of EC Directive 94/9/EC. Since 01.01.2006, work equipment must fulfil these minimum requirements.

Flammable and aggressive vapours

Due to the large number of flammable and aggressive vapours, it is not possible to give a blanket statement on the resistance of the exhaust air systems and ventilators. We recommend the following: Make sure the ventilator material will not be attacked by the vapours of the stored media - the manufacturer or the EC material safety data sheet of the liquid can help in determining this.

Guidelines/regulations/laws

On the following websites you find current information about the guidelines, regulations and laws of Germany and the European Union available free of charge:

www.baua.de

www.eur-lex.europa.eu

www.reach-helpdesk.de

Delivery period

Delivery period on request.

Tests

The products satisfy current state of the art standards, the safety requirements and the relevant regulations.

Packaging

Packaging, as far as required, is made from environmentally friendly and recyclable materials. Priority is given to optimum protection of the products.




Information

Subject to technical amendments. All dimensions and technical information are approximate.

No liability accepted for mistakes or printing errors.

Extraction systems and Ventilators

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Extraction systems



Exhaust air monitor
Model 2.00.320



Exhaust air monitor
Model 2.00.360



Ventilation unit
Model 2.00.340

ATEX-compliant

Directive 94/9/EC

CE Ex II 3 G c IIB T4



Extraction systems

4.1.1 Exhaust air monitor with ventilator



ATEX DIN EN CE



Exhaust air monitor - **2.00.320**

For easy ventilation and monitoring of safety cabinets. A sensor monitors the air stream and gives a visual and audible signal if the value drops below the set-point value. The complete exhaust monitoring unit including the integrated ventilator is supplied pre-assembled and is placed directly on the cabinet. The set-point value for the air stream flow rate is preset in the factory and can be individual adjusted by pressure difference socket. The cage is made from powder-coated sheet steel, silver pearl glimmer.

- ▶ Air flow sensor monitors the actual air flow speed - the complete venting system of the cabinet is monitored.
- ▶ Monitoring the volumetric flow rate and power supply.
- ▶ Optical and acoustic warning should the preset speed fall short.
- ▶ Including two floating contacts (24V/2A) for signal transmission to an external control room.
- ▶ Internal storage accumulator supplies the monitoring systems for 4 hours in the event of a power failure, display with easy fault indication.
- ▶ Easy to assemble because the exhaust air monitor is supplied ready to plug in.
- ▶ Memorize the last 50 error messages including date, time, type of error and change of menu.
- ▶ **Exhaust air volumetric suitable for every size of cabinet electrically adjustable.**
- ▶ Modern LED-Display „Blue Mode“ with selection of language German, English or French.
- ▶ The exhaust air monitor function can be switched off.
- ▶ Low noise level.
- ▶ Ventilator according to DIN EN 14986.
- ▶ **ATEX-declaration of conformity in accordance with directive 94/9/EC and type certificate by TÜV Süd.**
- ▶ Permanent monitoring in accordance with DIN EN 1946-7.

Ordering information/Dimensions

Width	mm	250
Depth	mm	318
Height	mm	352
Ø-collar	mm	75
Volumetric flow rate*	m ³ /h	0 – 72
RPM*	1/min	0 – 2820
Voltage/frequency	V/Hz	230/50
Current consumption	A	0.1
Noise level	Lp5A, db (A)	34 – 56
Ref. no.		2.00.320

* Gradual, without resistance

4.1.2 Exhaust air monitor without ventilator



For easy monitoring the ventilation of safety cabinets. A sensor monitors the air stream and gives a visual and audible signal if the value drops below the set-point value. The complete exhaust monitoring unit is supplied pre-assembled and is placed directly on the cabinet. The set-point value for the air stream flow rate is preset in the factory and can be individual adjusted by pressure difference socket. The cage is made from powder-coated sheet steel, silver pearl glimmer.

- ▶ Air flow sensor monitors the actual air flow speed - the complete venting system of the cabinet is monitored.
- ▶ Monitoring the volumetric flow rate and power supply.
- ▶ Optical and acoustic warning should the preset speed fall short.
- ▶ Including two floating contacts (24V/2A) for signal transmission to an external control room.
- ▶ Internal storage accumulator supplies the monitoring systems for 4 hours in the event of a power failure, display with easy fault indication.
- ▶ Easy to assemble because the exhaust air monitor is supplied ready to plug in.
- ▶ Memorize the last 50 error messages including date, time, type of error and change of menu.
- ▶ Modern LED-Display „Blue Mode“ with selection of language German, English or French.
- ▶ The exhaust air monitor function can be switched off.
- ▶ **ATEX-declaration of conformity in accordance with directive 94/9/EC and type certificate by TÜV Süd.**
- ▶ Permanent monitoring in accordance with DIN EN 1946-7.



Exhaust air monitor - **2.00.360**

Ordering information/Dimensions

Width	mm	210
Depth	mm	210
Height	mm	215
Ø-collar	mm	75
Voltage/frequency	V/Hz	230/50
Current consumption	A	0.1
Ref. no.		2.00.360

4.1.3 Ventilation unit with ventilator



For easy ventilation of safety cabinets. The ventilation unit including the integrated ventilator is supplied pre-assembled and is placed directly on the cabinet. The cage is made from powder-coated sheet steel, silver pearl glimmer.

- ▶ Easy to assemble because the exhaust air monitor is supplied ready to plug in.
- ▶ Low noise level.
- ▶ Ventilator according to DIN EN 14986.
- ▶ **ATEX-declaration of conformity in accordance with directive 94/9/EC and type certificate by TÜV Süd.**

Ordering information/Dimensions

Width	mm	250	250
Depth	mm	318	318
Height	mm	352	352
Ø-collar	mm	75	75
Volumetric flow rate* m ³ /h		72	60
RPM*	1/min	2600	1200
Voltage/frequency	V/Hz	230/50	230/50
Current consumption	A	0.1	0.1
Noise level Lp5A, db (A)		56	37
Ref. no.		2.00.339	2.00.340

* Without resistance



Ventilation unit - **2.00.340**

4.1

Filter system



Filter unit
Model 2.00.390*

ATEX-compliant

Directive 94/9/EC

CE  II 3 G c IIB T4



Filter system

4.2.1 Filter unit with ventilator

 **ATEX DIN EN CE**



Filter unit - **2.00.390***

For ventilation and monitoring of safety cabinets through almost 100% filtering of harmful vapours of solvents (hydrocarbons) by molecular adsorption. The filtering provides optimal protection of the users. An additional exhaust connection is not required, therefore the filter unit can be positioned direct on top or beside the cabinet and can be started to run. The cleaned air is released to the room, without consuming heated or conditioned air. A sensor monitors the air stream and gives a visual and audible signal if the value drops below the programmed value. The cage is made from powder-coated sheet steel, silver pearl glimmer.

- ▶ Fulfil the requirements of modern laboratories „green labs“ with highest flexibility of installation.
- ▶ Multistage, earthed filter system with safety of factor 2 – consists of:
 - 2 x activated carbon filters for extremely high efficiency of the filtration - almost 100%.
 - additional particle filter in accordance with DIN EN 779.
- ▶ Multistage filter warning system:
 - Pressure difference monitoring adjustable.
 - Filter elements and cover of filter monitored by microswitches.
 - Time function, up to the next maintenance - in acc. with DIN 12927 and EN 13463 filter change is necessary annual.
 - 3-months-check of the activated carbon filters by the user - monitored through input protocol and time function.
- ▶ List of filterable substances.
- ▶ Exhaust air volumetric for every size of cabinet electrically adjustable.
- ▶ Warning system with fault indication by ventilator failure.
- ▶ Electronic logging of the error messages.
- ▶ Two floating contacts (24V/2A) for signal transmission.
- ▶ Modern LED-Display „Blue Mode“ with selection of language German, English or French.
- ▶ Easy to assemble because the exhaust air monitor is supplied ready to plug in.
- ▶ Fulfils the requirements of TRbF 20 Annex L, BGV A1, BGR 132 and TRBS 2153.
- ▶ Ventilator in accordance with DIN EN 14986.
- ▶ **ATEX-declaration of conformity in accordance with directive 94/9/EC and type certificate by TÜV Süd.**
- ▶ Permanent monitoring in accordance with DIN EN 1946-7.

Ordering information/Dimensions

Width	mm	530
Depth	mm	440
Height	mm	270
Ø -collar	mm	75
Volumetric flow rate*	m ³ /h	0 – 37
RPM*	1/min	0 – 2820
Voltage/frequency	V/Hz	230/50
Current consumption	A	0.1
Noise level	Lp5A, db (A)	38 – 56
Ref. no.		2.00.390*

Accessories

Activated carbon filter

Ref. no. 2.00.391*

Particle filter

Ref. no. 2.00.392*

Filterset (activated carbon and particle filter)

Ref. no. 2.00.393*

* Gradual, without resistance

Ventilators



Radial ventilator
Model 2.00.176



Explosion-proof radial ventilator
Model 2.00.175EX

ATEX-compliant

4.3

Ventilators

4.3.1 DUEPERTHAL radial ventilators

ATEX DIN EN CE

For extracting explosive atmospheres and gases which are hazardous to health.

Housing with shaft seal from polypropylene (PP-FR) - fire retardant - manufactured using injection moulding process.

Polypropylene, anti-clockwise impeller with scooped blades, incl. PVC assembly pedestal.

- ▶ Universal use.
- ▶ Low noise level.
- ▶ Maintenance free.
- ▶ Ventilator according to DIN EN 14986.
- ▶ Easy assembly due to pedestal.
- ▶ Self-cooling AC motor.
- ▶ Integrated thermostatic switch.*
- ▶ **ATEX-compliant.**

Note!

The exhaust stream does not come into contact with the motor. An explosion-proof version is therefore only necessary within areas endangered by explosion.

Generally all new ventilators must be ATEX-compliant.

Ordering information/Technical data

Motor output	kW	0.012	0.016
Voltage	V	230 WS	230 WS
Frequency	Hz	50/60	50/60
Current consumption	A	0.17	0.26
Noise level Lp5A	db(A)	54	45
RPM	1/min	2600	1380
Weight	kg	5	5
Protection type		IP 54	IP 54
Ref. no.		2.00.176	2.00.177

Accessories - for both models

PVC collar, soft, with retainer straps (1 set=2 items)

Ref. no. **2.00.078**

PVC spiral hose NW 75 mm (max. 10 m long)

Ref. no. **2.00.079**

Hose clamps spiral hose made from stainless steel (Ø 70-90 mm)

Ref. no. **2.00.081**

Reducer connection made from aluminium (Ø mm 75/100)

Ref. no. **2.00.010**

Reducer connection made from aluminium (Ø mm 75/125)

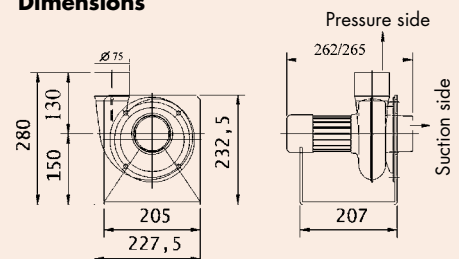
Ref. no. **2.00.050**

* Thermo protection acts as an overload protection, which automatically interrupts the power supply.



Ventilator - **2.00.176**

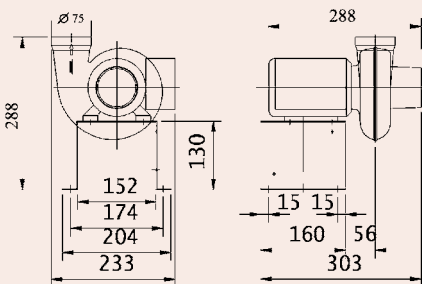
Dimensions



Explosion-proof ventilators

4.3.2 DUEPERTHAL radial ventilators

ATEX DIN EN CE
4.3

 Ventilator - **2.00.175EX**
Dimensions


Housing with shaft seal from polypropylene (PP-FR) - fire resistant - manufactured using injection molding process.

Polypropylene, anti-clockwise ventilator with scooped blades, incl. grey (RAL 7011) coated sheet steel assembly pedestal.

- ▶ **Explosion-proof.**
- ▶ Universal use.
- ▶ Low noise level.
- ▶ Maintenance free.
- ▶ Ventilator according to DIN EN 14986.
- ▶ Easy assembly due to pedestal.
- ▶ Self-cooled three-phase motor, EExIIT4.
- ▶ **Model 2.00.179EX self-cooling three phase AC motor with capacitor for AC operation.**
- ▶ **ATEX-compliant.**

Ordering information/Technical data

Motor output	kW	0.18	0.12	0.12
Voltage	V	400	400	230
Frequency	Hz	50	50	50
Current consumption	A	0.92	0.37	1.1
Noise level Lp5A	db(A)	54	45	54
RPM	1/min	2750	1355	2780
Weight	kg	11	11	11
Protection type		IP 55 EExellT4	IP 55 EExellT4	IP 54 EExellT4
Ref. no.		2.00.175EX	-	2.00.179EX
Ref. no., with PTC resistor*		2.00.176EX	2.00.178EX	-

Accessories - for both models

Motion dampening (1 set=4 items)

Ref. no.	2.00.077
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Collar made from PVC, soft, with retaining straps (1 set=2 items)

Ref. no.	2.00.078
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Spiral hose made from PVC NW 75 mm (max. 10 m long)

Ref. no.	2.00.079
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Hose clamps for spiral hose made from stainless steel (Ø 70-90 mm)

Ref. no.	2.00.081
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Thermistor machine protection device (230 V)*

Ref. no.	2.00.080
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Reducer connection made from aluminium (Ø mm 75/100)

Ref. no.	2.00.010
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Reducer connection made from aluminium (Ø mm 75/125)

Ref. no.	2.00.050
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* For units with PTC resistor (explosion-proof versions) a thermistor machine protection device - see accessories - **must** be connected for the purpose of switching off the unit.