

PV 4200 EX VENTILATOR

BEDIENUNGSANLEITUNG USER MANUAL



DE

Ventilator



EN

Ventilator

**Dette produktet kan
kjøpes fra:**

HOLTE
INDUSTRI



holteindustri.no
Håtveitvg. 13, 3810 Gvarv
Tlf. 35 95 93 00

EC Declaration of Conformity, IIA
In conformity with EC Machine Directive 2006 / 42 / EC,
Amendment of the Directive 95 / 16 / EC (new version)

For unit series: Ventilators / PowerVent
Model: PV 4200 EX
Type: EFI75XX

HEYLO GmbH of Im Finigen 9, D-28832 Achim, Germany, declares that, if they are fitted, maintained and used in conformity with the operating instructions and the generally accepted engineering standards, the machines mentioned are in keeping with the fundamental safety and health requirements. In case of unauthorised changes of the machine, the directives shall forfeit their validity.

Applicable EC directives:

EC Machinery Directive	2006 / 42 / EG
Low Voltage Directive	2006 / 95 / EG
EMC Directive	2004 / 108 / EG
RoHS Directive	2011 / 65 / EG

Applied harmonised standards:

EN ISO 12100-1:2003-06-09	Safety of machines - basic concepts, general principles for design Part (1): Basic terminology and methodology
DIN EN 12100-1:11:2003	Safety of Machines - fundamental notions,
DIN EN 12100-2:11:2003	general principles for design; Part (2): Technical principles and specifications
DIN EN 60204-1:06:2007	Safety of machines and electric equipment in machines (VDE 0113-1)
DIN EN 50081-2:03:1994	Electro-Mechanical Compatibility, generic standards Emission Standards for Industrial Environments (VDE 0839-81)

Applied national standards as well as technical specifications:

BS EN ISO 12100	Safety of machines, risk assessment
EN 61000-6-3	Electromagnetic compatibility
EN 61000-6-2	Electromagnetic compatibility
EN 60079-0: 2006	General requirements on Electrical Apparatus for Explosive Gas Atmospheres
EN 60079-1: 2004	General requirements on Electrical Apparatus for Explosive Gas Atmospheres
EN 60079-7: 2003	General requirements on Electrical Apparatus for Explosive Gas Atmospheres

The devices are type-tested in conformity with German standard DIN VDE 0700, part 1 and part 30 EN 60335-1 and EN 60335-2-30 and bear a CE mark.



Achim, 30th June 2014

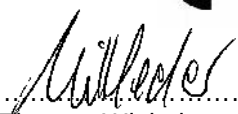

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Dr Thomas Wittleder
- Managing Director -

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(1) Safety guidelines

CAUTION: Read carefully before starting up !

Please observe the notes in the operating instructions carefully. In case of non-observation, the warranty claims will become void. The manufacturer shall not be liable for any damage and/or consequential damage resulting.

Prior to the first initial operation: Do NOT put the air mover into operation, if you discover transport damage on the turbine blade, cover or housing.

Keep away from children: Do not allow children to play with or in the vicinity of the unit.

Electric connection: HEYLO PowerVent 4200 EX has been designed for operation at 115 / 230 V and 50 / 60 Hz. In explosive atmospheres, the device may be operated only with attached special plug. In normal environments, an adapter (art. No. 1450209) can be used. The sockets used have to be earthed ! Prior to connection to the mains, please always make sure that the switch has been set to OFF.

Protect the power cable against damage: Never use the unit with damaged power cable. If the power cable has been damaged, it has to be replaced by a cable of the same type and dimension.

Extension cable: Use approved extension cables only ! Using cables of wrong size may lead to fires or electric shock and damages to the unit.

Handle with care: Do not drop or throw the unit as this may cause damage to the unit or wiring.

Operate on solid surface: Start the air mover only if it is in a stable and upright position. If the unit is in an uneven position and runs at full speed, it should not shift. When the unit moves, check the rubber feet for damage and replace them, if and when necessary.

Secure during transport: When transporting devices in vehicles, secure against slipping.

During operation:

Keep dry: The unit must not be operated in puddles or in standing water. Do not store or operate outdoors. If the electric wires or parts of the unit get wet, the unit has to be thoroughly dried before re-using.

Safety: During the operation of the ventilator, eye and ear protectors have to be worn. Keep your fingers and hands away from the paddle wheel. Never move the air mover whilst running

Keep the air openings free: Do not cover or block the air inlets and outlets.

Do not use any speed controller: In order to reduce the risk of fire or electric shock, turbo dryers should not be used with electronic speed controllers.

Repair of the device:

Stop the device immediately if you hear loud mechanical vibration noises or vibrations. Please have the repairing work carried out by service partners of HEYLO Company only.

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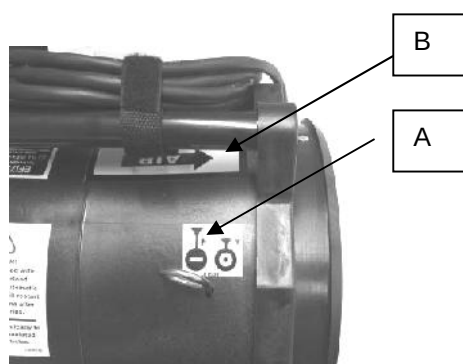
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(2) Possible application

In potentially explosive environments, transport ventilator PowerVent 4200 EX is the right choice. It draws off dangerous gases safely and quickly. The housing made of a robust ABS carbon plastic passes voltage into the floor and thus prevents static charges and for this reason dangerous sparking. The housing and motor sealing is in keeping with the high protection class IP65 and offers an effective protection against dust and water.

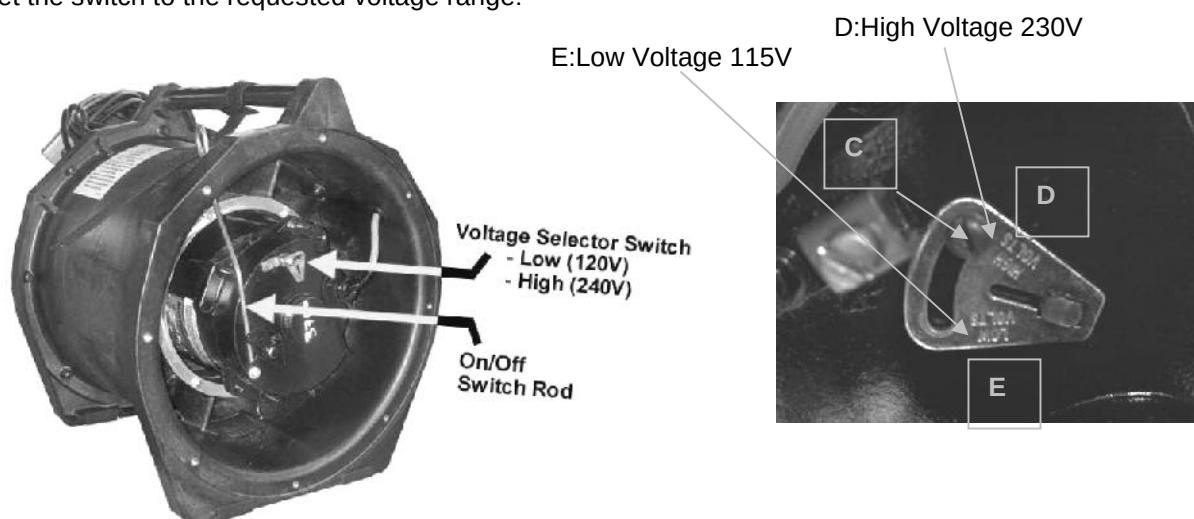
(3) Operation

Before starting up the ventilator, set the unit to the correct voltage. (230 V is preset)
Connect the unit to an earthed socket and set to switch **A** to ON. Check correct operation before leaving the unit unattended. Do not move or carry the air mover during operation. Observe the direction of air. It is marked by an arrow **B** on the housing.



Setting - voltage range

If the unit is connected to a 115V network, the voltage selector switch has to be set to the corresponding voltage. For this purpose use a slot screwdriver to undo the safety screw **C**, and then set the switch to the requested voltage range:



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Special features in explosion-proof areas:

- Installation conditions and different hazardous areas have to be observed.
- Connect device to explosion-proof power socket only.
- Only use antistatic air hoses and ground them, when required.

Accessories**Please use suitable accessories only !**

For use in non-explosive areas you can use the following accessories:

1450290	Connection adapter from 230 CEE to 230 V shockproof plug
1250067	Air hose diam. 305 mm, length 7.6 m
1670006	Fastening belt for air hose
1250203	Connecting sleeve for hot-air hose
1250060	Dust bag (dust class M)

For use in explosive areas you can use the following accessories:

1450290	Connection adapter from 230 CEE to 230 V shockproof plug
1250066	Antistatic air hose diam. 305 mm, length 7.6 m

(4) Information on ex-proof applications

- (1) Zones - Explosion groups - Temperature classes
- (2) Explosion protection | Classification
- (3) Division into temperature classes

**Zones - Explosion groups - Temperature classes****Introduction**

Explosive areas are divided into zones; the apparatuses into device groups and device categories. Given a certified unit, the marking on the type plate reveals, for which zone the explosion-proof apparatus may be used.

Division into device groups

The device groups are divided up into group I and II, whereby group I deals with underground mining, and group II covers gas and dust explosion protection in all other applications.

Division into zones

Explosive areas are divided up into six zones whereby the division depends on the probability of how frequently and for how long it has to be calculated that a hazardous explosive atmosphere occurs. A differentiation is made between combustible gases, mists, steams and combustible dusts.

For gases, mists, vapours zones 0, 1 and 2 apply whereby the demands on the apparatuses used there increase from zone 2 to 0. Apparatuses for zone 0 have to be built in such a way that "a sufficient explosion protection is ensured even when an ignition protection type fails or when two failures occur". For example, a potential-free sensor passively installed in zone 0, which is operated in an intrinsically safe current circuit (II2(1)G [Ex ia] IIC), has an additional own approval. For dusts zones 20, 21 and 22 apply whereby the demands on the apparatuses used there increase from zone 22 to 20. Equipment for zone 20 and 21 have to be approved especially for this use. PV4200 EX is not suitable for explosive dusts.

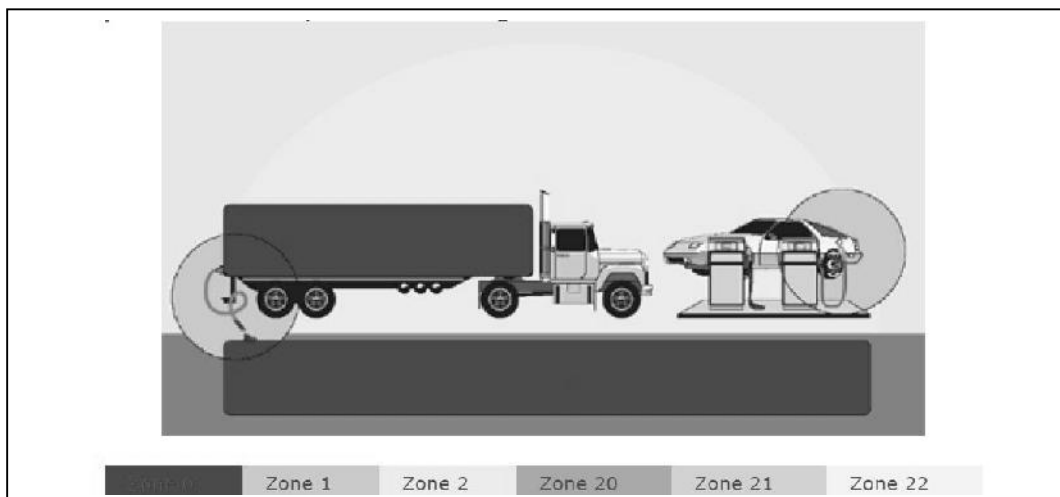
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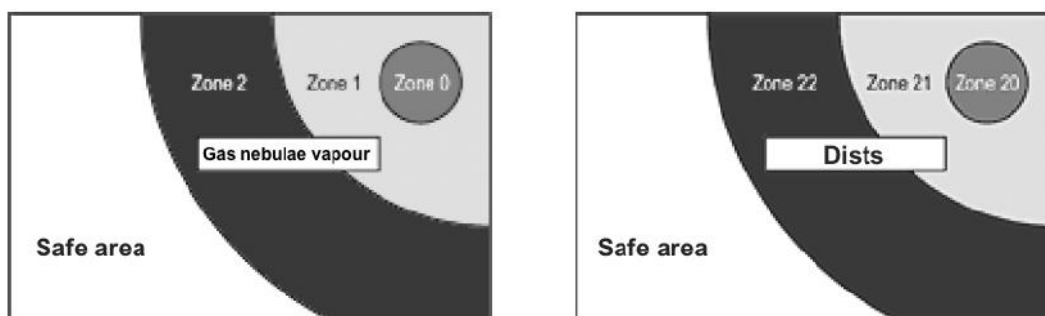
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Explosion protection | Classification



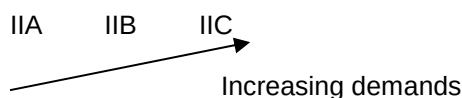
Explosion groups, temperature classes

If the device group and the device category is used to determine, in which zone an apparatus may be used, the explosion group and the temperature class determines, for which media the apparatus may be used within the zones. In turn, the type of ignition does not present a quality characteristic, but is a constructive solution chosen for the apparatus to realise the explosion protection.



Division into explosion groups

Depending on the type of ignition protection the explosion-proof apparatuses for gas, fogs and vapours are divided up into three explosion groups (IIA-IIB-IIC). The explosion group is a measure for the flammability of gases (explosive atmosphere). The demands on the apparatus increase from IIA to IIC.



Division into temperature classes

In case of explosion-proof apparatuses which are installed within the ex area, a division into six temperature classes (T1 to T6) is made. As is wrongly assumed frequently, the temperature class is not the application temperature of the apparatus, but the maximum permissible surface temperature of the apparatus, which relative to an ambient temperature of +40 deg. C must not be exceeded at any part of the surface and at no point in time. The maximum surface temperature must definitely be lower than the ignition temperature of the surrounding medium. The demands on the apparatus increase from T1 to T6.

(5) Maintenance / repair

CAUTION! Remove the mains plug before maintenance and repair.

Inspection of the electric system: Check the power cord for damage in regular intervals. Remove the housing in regular intervals (at least once a year) and check the internal wiring for bare wires, loose fasteners and discolouration. If and when necessary remove and repair the damaged cable. Do not take the air mover apart for maintenance purposes. The air mover is maintenance-free. Replace the special screws and washers as well as parts of the air mover by original HEYLO spares parts exclusively.

Clean air inlet: Clean the air mover regularly in order to remove any collected dust and dirt. Lint or other dirt which has collected at the air let has to be removed. Use vacuum or pressurised air to remove lint and dust from the impeller, motor and side covers.

Clean housing: Clean the housing with a mild detergent and water. Use vinyl cleaner or polish to restore the original glossiness. Do not use any solvents (such as MEK, acetone), which contain chlorinated hydrocarbons.

Checking the outer side: Check the external components and make sure that have been installed correctly. Listen for unusual noises. Check the rubber feet on the frame for wear and damage.

Motor and wiring must remain dry: In order to not damage the electric components, the turbo dryer must not be cleaned by a water hose or pressurised water. If electrical components get wet nonetheless, they have to be dried immediately.

(6) Technical data

Type	PowerVent 4200 EX
Air flow rate max. (cum/h)	4,250
Compression (Pa)	370
Power connection (V/Hz)	115V/230V 50Hz/60Hz
Current consumption (A) 115V/230V	7.2 / 3
Power consumption max. (kW)	0.56
Protection class (motor/housing)	IP 65
Height x Width x Length (mm)	406 x 381 x 406
Weight (kg)	20
Sound level dB(A)	89
ATEX classification (device)	 II 2 G Ex de IIB T6
ATEX classification (motor)	 II 2 G Ex d IIB

CAUTION: Within the scope of further development, technical data may be changed without prior announcement. Some values are approximate values.

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(7) Fault finding

WARNING:

Maintenance work shall have to be carried out with the unit switched off, i.e. with mains plug removed.

PROBLEM	CAUSE	Versi on	SOLUTION
Motor is not operating	No power to unit. The unit has not been switched on. Impeller is blocked. Air inlet or outlet is blocked. Switch has broken off. Loose wiring.	B B B B HS HS	Connect the unit; check the fuse. Switch the unit on. Remove the reason for the blockage. Switch the unit off and let it cool down; then remove blockage. Order replacement switch from the dealer or HEYLO. Check wiring and tighten, if required.
The motor is running, but the impeller turns irregularly or makes contact	A heavy impact has bent the motor suspension so that the impeller jams. A heavy impact has caused the motor to slip out of the suspension so that the impeller jams.	HS HS	Remove the motor from the housing, replace or repair the bent motor suspension. Remove the motor from the housing, then place the motor in the suspension correctly.
Unit vibrates excessively	Collection of dirt on the wheel. Unbalance of the impeller. Impeller is bent. Motor shaft is bent.	B HS HS HS	Clean impeller. Balance or replace the impeller. Replace impeller. Replace motor.

B = user / HS = HEYLO service

Ask your local dealer for spare parts or get in touch with HEYLO service department.

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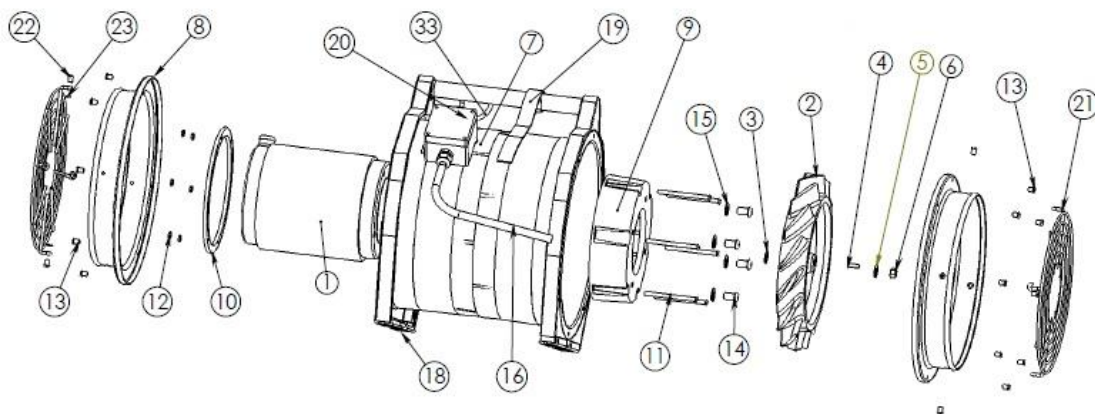


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(8) Wiring diagram:



(9) List of spare parts



Item	HEYLO Art. No.	Description
1	1761050	ATEX MOTOR
2	1761051	Fan wheel
3	1761052	Washer / 1/2"
4	1761053	Safety splint
5	1761054	Washer / 7/16"
6	1761055	Nut
7	1761056	Housing
8	1761057	Hose connection socket / 12"/30 cm
9	1761058	Cast adapter
10	1761059	Motor flange
11	1761060	Screw / 10-24 X 3-1/2"
12	1761061	Nut
13	1761062	Nut
14	1761063	Nut
15	1761064	Circlip
16	1761065	Connection cable
18	1761066	Pedestal
19	1761067	Cable of fixing cord
20	1761068	Rubber grommet
21	1761069	Intake grille
22	1761070	Blind rivet 3/16"
25	1761071	Screw / 5/8"
27	1761072	Washer
28	1761073	Blind rivet
32	1761074	Switch box
33	1761075	Shift linkage for ON / OFF switch

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