

Use and Maintenance Manual



Portable exhaust extractor

GEPARD-2000

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1. Introductory Remarks

The purpose of the present User's Manual is to supply User with directions within the range of application, installation, start-up and the operational use of the **GEPARD-2000** portable exhaust extractor.

Installing, start up and operational use are exclusively admissible after getting acquainted with the contents of the Use and Maintenance Manual.

With regard to continuity of work carried on improvement of our products, we reserve for ourselves the revision possibility of the draft and technological changes improving their functional features and safety.

The construction of the GEPARD-2000 portable exhaust extractor meets the requirements of the current state of technology as well as the safety and health assurances included in:

- **2006/42/EC Machinery Directive** of the European Parliament and of the Council of 17 May, 2006 on machinery – amending the 95/16/EC (recast) /*Journal of Laws EC L157 of 09.06.2006, page 24*/
- **2014/35/EC Directive** of the European Parliament and of the Council of 26 February, 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits. /*Journal of Laws EC L96 of 29.03.2014*/

The appliance meets the requirements included in:

- **2009/125/EC (ErP) Directive** of the European Parliament and of the Council of October 21th, 2009 establishing a framework for the setting of ecodesign requirements for energy-related products / *Journal of Laws L 285 of 31.10.2009* /
- **327/2011 (EU) Regulation** of March 30th, 2011 on implementing the **2009/125/EC Directive** of the European Parliament and of the Council with regard to ecodesign requirements for fans driven by motors with an electric input power between 125W and 500 kW / *Journal of Laws L No. 90 of 06.04.2011* /

The device has been constructed and produced on the basis of following harmonized standards:

- **PN-EN ISO 12100:2012** – “Safety of machinery. Basic concepts, general principles for design. Risk assessment and risk reduction”.
- **PN-EN 60204-1:2010** – “Safety of machinery. – Electrical equipment of machines. Part 1: General requirements”.
- **PN-EN 60034-1:2011E** – “Rotating electrical machines – Part 1: Rating and performance”
- **PN-EN ISO 13857:2010** – “Safety of machinery. Safe distances to prevent hazard zones being reached by upper and lower limbs”.

2. Application

GEPARD portable extractors have been constructed for removal the exhaust gas emitted from the exhaust pipe of personal cars and medium-size vehicles, during the engine tests, diagnostics, adjustment etc. GEPARD-2000 portable extractor is designed for cargo-, and medium size vehicles.

3. Reservations of Producer

- A. Producer accepts no liability for any consequences following from the operational use that is in contradiction to the purpose of application.
- B. It is unacceptable to install on the device structure any additional elements not belonging to its normal construction or accessory set.
- C. Any structural changes or modification of the device, carried out by User on one's own are not permitted.
- D. Protect the housing from mechanical damage.
- E. **The appliance is not appropriate for conveying the air that is contaminated with a mixture of flammable substances, in form of gas, vapour, mist or dust, which would create explosive atmosphere with the air.**
- F. Do not use the device for conveying the air containing viscous impurities that could accumulate (build up) on the device surface, especially on the impeller.
- G. Neither use it for forwarding the air with aggressive pollutants which will destructively effect the device structure.
- H. During the operational use, maximum impeller rotations should not exceed the nominal rotations.
- I. Producer is not responsible for wounds, injuries, body laceration experienced by User or personnel during the improper operational use.

4. Technical Data

Table No.1

	Volume flow	Supply voltage	Motor rate	Weight	Diameter of the outlet
	[m ³ /h]	[V]	[kW]	[kg]	[mm]
GEPARD-2000	2000	230 / 50Hz	1,1	48	200

CAUTION:

- **admissible time of continuous run of the engine (at maximum rotations) is 60 seconds.**
- admissible total weight of the serviced vehicle: GEPARD-2000 – up to 3,5t and above 3,5t.

5. Structure and Function

The portable exhaust extractor consists of a radial fan in a metal housing placed on a framework. The suction tube is eccentrically fastened to the housing and it provides contactless connection with the vehicle's exhaust pipe (whereby the exhaust pipe can be at various heights). Due to the S-shape of the suction tube, it can be adjusted to the height of the vehicle exhaust pipe.

It is important to fasten a flexible hose to the outlet connection to discharge the exhaust volume in shortest distance outside the building. Apply the WS motor protective switch to energise the GEPARD-2000 portable extractor.

The appliance is equipped with a 5-metre-long power supply cable ended with a plug.

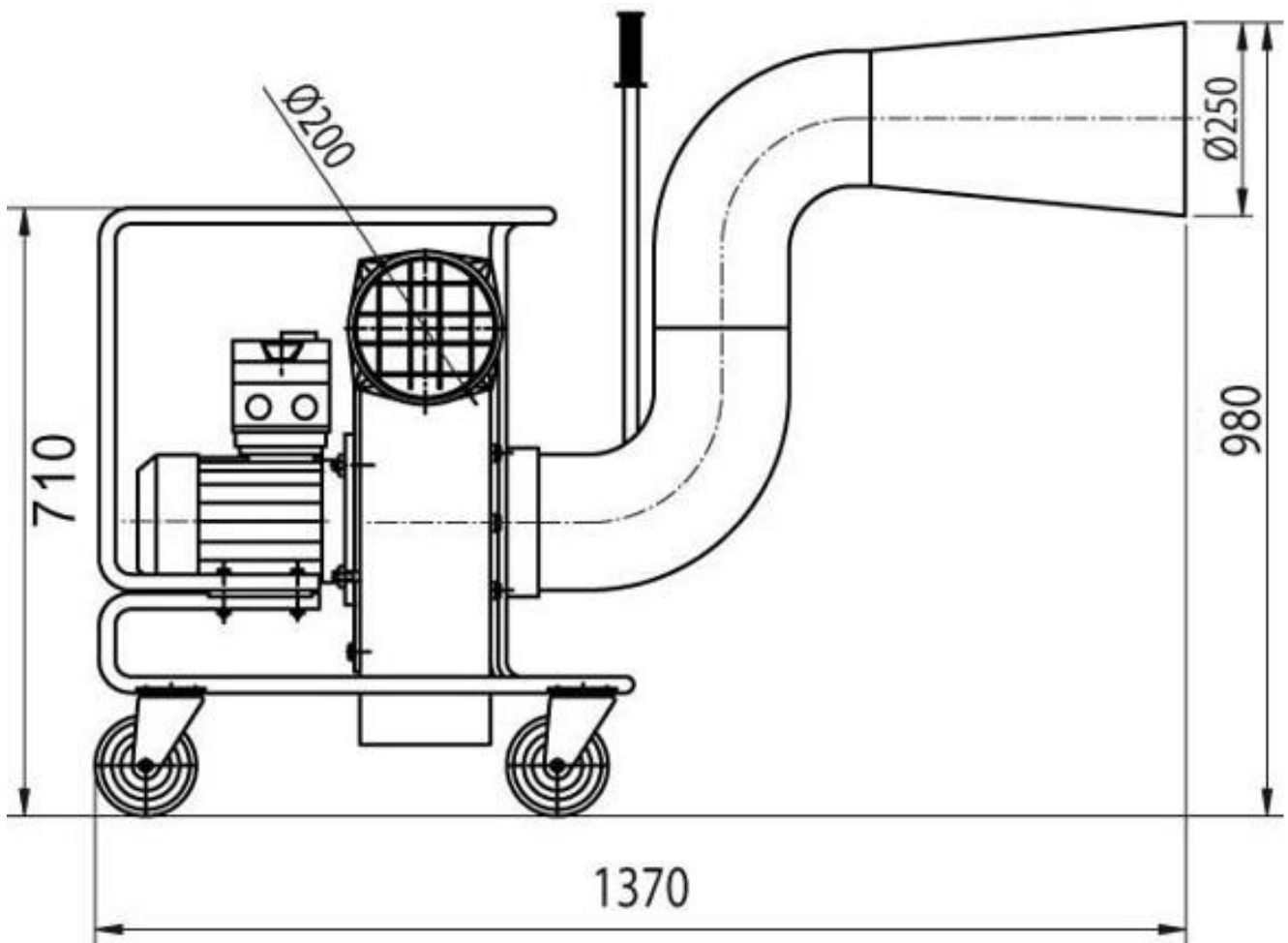






Fig. No.1 – Structure and Dimensions – GEPARD-2000

Flexible hoses
Table No.2

View	Type	Diameter [mm]	Temperature range of the conveyed air [°C]	Remarks
	G-EX1-125 G-EX1-200	125 200	-20 do +150 (for short time +200)	1)
	MCS-125 MCS-200	125 200	-20 do +90 (for short time +110)	2)
	ST/MP-125 ST/MP-200	125 200	-30 up to +120	3)
	STX-125 STX-200	125 200	-30 do +170 (for short time +220)*	4)

* Upon fresh air supply of approx. 50%

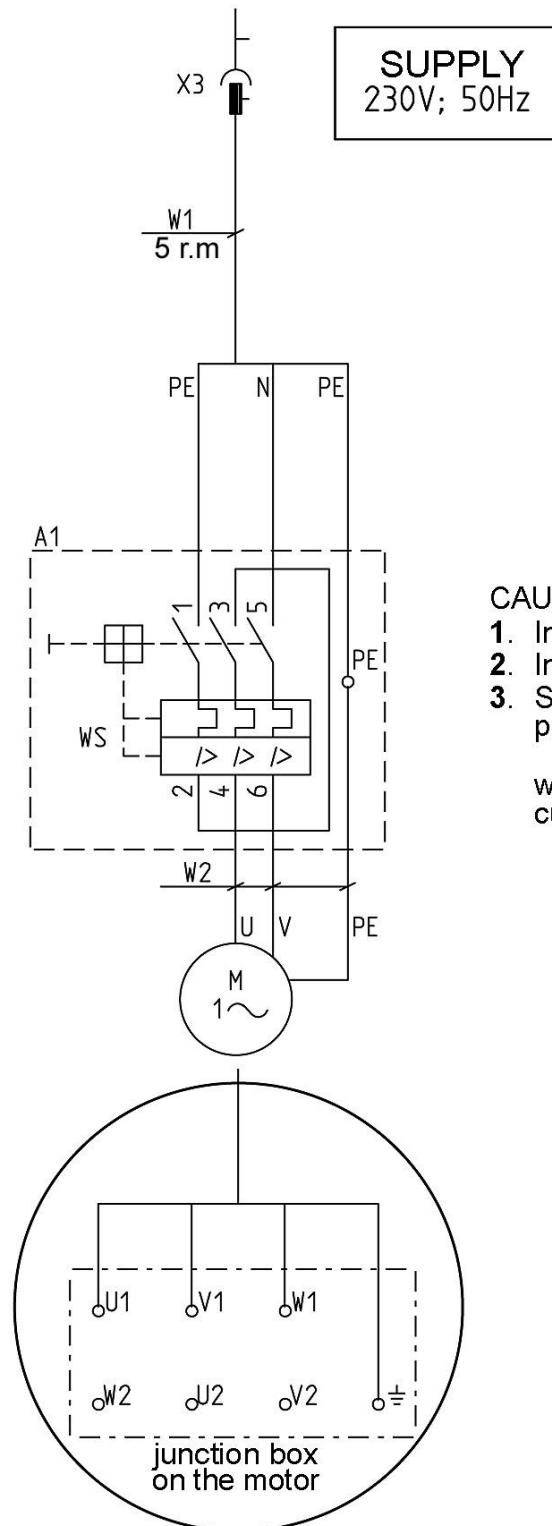
- 1) External plastic spiral. Walling of polyester neoprene coated fabric. Resistant to permanent deformation.
- 2) External zinc-coated steel spiral. Hardly flammable walling of PVC coated glass-fibre.
- 3) Without external spiral. PVC coated glass fabric wound on an internal steel spiral.
- 4) Without external spiral. Steel wire inside the hose wall. Reinforced with a fabric braid. Walling is hardly flammable and protects from rubbing (friction) due to smooth surface.

6. Assembly and Start-up

The device attachment consists in placing it near to the vehicle exhaust pipe and turning the eccentric suction tube to adjust the tube height with the vehicle exhaust pipe. To lead (discharge) the exhaust gas volume outside the building it is important to fasten a flexible hose, whereby the hose end must be placed outside the building.

Sorts and types of hoses is specified in Table No.2.

WARNING All the activity connected with power supply ought to be carried out by an authorized person with testified electrical qualifications and according to the Connection Diagram in Fig. No.3.



CAUTION:

1. Insulation class **I**
2. Ingress protection **IP54**
3. Settings of the motor protective switch WS
 $I_t = 1,1I_n$
 where I_t means rated current of the motor

connect the windings according to the diagram located on the junction box

Fig. No.3 – Connection Diagram – GEPARD-2000

7. Operational Use

Construction and the robust execution of the extractor ensures reliable function without the preliminary adjustment and continuous routine technical supervision.

In situations when any improper function or failure is by noise or visually noticed, disconnect the extractor from the power supply, submit it to technical revision and remove the failures. Typical malfunctions and their reasons are described in Section 8.

8. Troubleshooting Guide

Table No.3

	Problem	Possible reason	Corrective action
1.	Significant decrease in the intake volume air	Obstacle objects/impurities reducing the air flow deposited in the inlet tube.	Spot and remove the obstacle
2.	Sudden vibrations of the extractor	Obstacle objects/impurities reducing the air flow deposited / got stuck within the impeller	Switch off the motor from the power supply system, disconnect the hose from the outlet and remove the obstacle object.
		The impeller is faulty	Replace the impeller for a new one

9. Maintenance and control

Due to construction, the device can be used without continuous routine everyday technical supervision. In case when any improper function or failures are visually or by noise spotted – carry out revision.

Once a year of operational use, submit the extractor to technical revision during which check following aspects:

- Check the impeller state – if excessive vibrations are occurring (due to the impeller failure) – submit the impeller to a corrective balancing.
- The motor ought to be examined according to the operational regulations of electrical appliances.
- During the maintenance, check the mechanical and electrical connections.
- Every 2 years of operational use, examine the fan motor – insulation resistance of the windings, grounding resistance, state of the bearings, if necessary replace the bearing for new of the same type.
- Every 3 months – put some lubrication grease on the frictional rotary connector of the suction tube. If the suction tube is turning too easily – tighten up the adjustment nuts M6 on the mounting flange.

WARNING Technical revision ought to be executed exclusively after the appliance is disconnected from the power supply system.

10. Occupational Health and Safety

Start up and the operation use are only admissible after getting acquainted with the contents of the present manual. For safety reasons, the device ought to be connected to the electrical power system according to the enclosed diagram and in compliance with the valid regulations within the range of personal protection from electrical shock and protection from short-circuit- and overload effects. Safety regulations are included in the standard PN-E-05009 – “Electrical installations of buildings”.

WARNING

Any repair and technical revisions ought to be executed exclusively after the extractor is switched off and disconnected from the power supply system. While starting, do not put your hand and other objects into the fan outlet orifice. The extractor can be started only the discharge hose is fastened to the fan outlet.

11. Transport and Storage

GEPARD portable extractors are placed on a pallet and wrapped in foil. For the time of transport on a pallet, the extractor ought to be fastened to the pallet and protected from overturn and slide.

The device ought to be stored in a dry and well ventilated room. Do not put one extractor on top of another one.

12. Terms of warranty

The period of warranty for the purchased device is indicated in the “Card of Warranty”.

The warranty does not comprise:

- mechanical damage and dysfunctions caused by User,
- device failures caused during use which was in contradiction with the purpose of operational use and the present Use and Maintenance Manual,
- damages being cause during improper transport, storage or incorrect maintenance,

Infringement of the Section 3 “Reservations of Producer” of the Use and Maintenance Manual and especially modifications undertaken by User on one’s own shall cause the loss of warranty validity.

13. Sample of Declaration of Conformity

Declaration of Conformity EC No.

Manufacturer (eventually the authorized representative / importer):

name: **KLIMAWENT S.A.**

address: **81-571 Gdynia, ul. Chwaszczyńska 194**

A person, authorized for issuing the technical documentation:

hereby declares that the appliance:

name: **Portable exhaust extractor**

type/model: **GEPARD-2000**

serial number: year of production:

meets the requirements of the subsequent European Directives:

- **2006/42/EC Machinery Directive** of the European Parliament and of the Council of 17 May, 2006 on machinery – amending the 95/16/EC (recast) /*Journal of Laws EC L157 of 09.06.2006, page 24*/
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- **PN-EN ISO 13857:2010** – “Safety of machinery. Safe distances to prevent hazard zones being reached by upper and lower limbs”.

.....
place, date

.....
signature of authorised person

.....
name, surname, function
of the signatory

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District Court Gdańsk-Północ
in Gdańsk, VII Wydział Gospodarczy
of the National Register of Court
KRS 0000308902 company stock
13.779.200 zł paid in total

NIP: 958 159 21 35

REGON: 220631262

Bank Account: **Santander Bank Polska S.A.**

56 1500 1025 1210 2007 8845 0000

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06.12.2018/EN