

USE AND MAINTENANCE MANUAL



Hanging exhaust extractor **GLOBAL H-1** **GLOBAL H-2**

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INTRODUCTION

The purpose of the present Use and Maintenance Manual is to supply User with directions within the range of application, assembly, start-up and operational use of the **GLOBAL H** hanging exhaust extractor.



Prior to assembly at the place of operation and use, it is important to get thoroughly acquainted with the contents of the present instruction.



1.

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.

Construction of GLOBAL H meets the requirements of the current state of technology as well as the safety and health assurances included in:

2006/42/EC Directive of the European Parliament and of the Council of the 17 May, 2006 on machinery, amending the 95/16/EC Directive (recast) / Official Journal EC L157 of the 09.06.2006, page 24);

Additionally, it is in accordance with the subsequent harmonised standards:

EN ISO-12100:2012 Safety of machinery – General principles of design – Assessment and reduction of hazard

PURPOSE

Hanging exhaust extractors GLOBAL H are designed for removal of the exhaust volume from exhaust pipes of the serviced vehicles – during the engine tests, diagnostics, adjustments, etc. They are applied in bus depots, garages, car service-, diagnostic stations. They are installed at height from two up to three metres to the columns

2. or walls of garages, workshops or car service stations.



RESERVATIONS OF MANUFACTURER

- Manufacturer accepts no liability for any consequences following from the operational use that is in contradiction to the purpose of application.
- 3. • Installing of any additional elements that are not belonging to the normal device structure (or accessory set) is not acceptable.
- Do not introduce any structural or constructional modifications on the device system one's own.
- Prior to installing – check the load carrying capacity of the ceiling / wall, in a place where the unit shall be installed; unsure setting of mounting bolts could result in uncontrolled device detachment, its damage and risk to the operator / people in the vicinity.
- The system cannot be used for forwarding the air contaminated with a flammable mixture in form of gases, vapours, mists and dusts – that, in connection with the air, would create explosion atmosphere.
- Do not apply the system for forwarding the air containing viscous impurities that could deposit on the elements of the system, (especially on the impeller).
- The hanging extractor cannot be applied for conveying the air containing aggressive contaminants that could damage the system structure.
- 4. • Manufacturer is not responsible for injuries / body lacerations – experienced by operator during careless operational use.

TECHNICAL DATA

Table No.1

Table No. 1

| View | Type ¹⁾ | Quantity of connections | Diameter [mm] | Length [m] | Recommended volume flow [m³/h] | Thermal resistance [°C] | Appli- cation ⁴⁾ | Fan | Weight [kg] |
|---|--------------------|-------------------------|------------------|---------------|-----------------------------------|----------------------------|--------------------------------|------------------------|----------------|
|  | GLOBAL H-1-100 | 1 | 100 | 5 | 400 | 150 ²⁾ | SO | WPA-3-E-N | 37,5 |
| | GLOBAL H-1-100/CF | | | | | 300/150 ³⁾ | | | |
| | GLOBAL H-1-125 | | 125 | | 700 | 150 ²⁾ | SD | WPA-5-E-N WPA-5-D-N | 40 |
| | GLOBAL H-1-125/CF | | | | | 300/150 ³⁾ | | | |
| | GLOBAL H-1-150 | | 150 | | 1500 | 150 ²⁾ | SC | WPA-6-E-N WPA-6-D-N | 50 |
| | GLOBAL H-1-150/CF | | | | | 300/150 ³⁾ | | | |
|  | GLOBAL H-2-100 | 2 | 100 | 2 x 5 | 800 | 150 ²⁾ | SO | WPA-5-E-N WPA-5-D-N | 50 |
| | GLOBAL H-2-100/CF | | | | | 300/150 ³⁾ | | | |
| | GLOBAL H-2-125 | | 125 | | 1400 | 150 ²⁾ | SD | WPA-6-E-N WPA-6-D-N | 60 |
| | GLOBAL H-2-125/CF | | | | | 300/150 ³⁾ | | | |

- 1) upon selection of the extractor size – contact KLIMAWENT S.A. Sales Department
- 2) exhaust hose of thermal resistance 150°C (for a short time 200°C)
- 3) a hose section near the nozzle of thermal resistance 300°C (for a short time 350°C)
the further hose section 150°C (for a short time 200°C)
- 4) **SO** – car; **SD** – medium size vehicle; **SC** – large vehicle, truck

Hanging extractor consists of subsequent elements:

- exhaust hose with hose clamps and rubber clamp covers
- installing accessories: wall bracket, connections (single or double) and hangers for hoses

Admissible continuous work of the vehicle engine at maximum rotations must not exceed 60 seconds.

Fans






Table No.2

| Type | Supply voltage [V] | Motor rate [kW] | IP | Weight [kg] |
|-------------|--------------------|-----------------|----|-------------|
| WPA-3-E-1-N | 230 | 0,25 | 54 | 14 |
| WPA-5-E-1-N | | 0,37 | | 17 |
| WPA-6-E-1-N | | 0,55 | | 24 |
| WPA-5-D-1-N | 230 | 0,37 | 54 | 25 |
| WPA-6-D-1-N | | 0,75 | | 32 |

CAUTION: Motor protective switches are included in Section “Electrical accessories”

Nozzles

Table No.3

| Sort of the extractor | Type | Connection diameter [mm] | Inlet dimension [mm] | Weight [kg] | Remarks |
|---|----------------------|--------------------------|----------------------|-------------|---|
|  | D-100 | 100 | 100 | 1,3 | metallic, shut-off cover closed by a spring; for manual disconnection |
| | D-125 | 125 | 125 | 1,6 | |
| | D-150 | 150 | 150 | 2,2 | |
|  | AN-100 | 100 | 125 | 1,0 | metallic, closed by a manual knob; for manual disconnection |
| | AN-125 | 125 | 125 | 1,2 | |
| | AN-150 | 150 | 150 | 1,45 | |
|  | SZGO-125 | 125 | 150 | 2,5 | round rubber nozzle with lever clamp for manual disconnection |
| | SZGO-150 | 150 | 170 | 3,2 | |
|  | SZGP-100 | 100 | 180 x 100 | 2,1 | oval rubber nozzle with lever clamp for manual disconnection |
| | SZGP-125 | 125 | | 3,2 | |
|  | SRGO-100 SRGP-125 | 100 125 | 180 x 100 | 2,4 | oval rubber nozzle for built-in and covered exhaust pipes, for manual disconnection, (the clamp is inside the exhaust pipe) |

On special request can be applied nozzles on a suction stand (additionally for double exhaust pipes) – see Catalogue, Section “Exhaust extractors”.

Fig. No.1 – RO-4-ALAN-N – Flow chart

STRUCTURE AND FUNCTION

GLOBAL-H extractor consists of a wall bracket, flange-type fan (placed within the bracket) and a double- or single connector, where the hoses are fastened. At the end of the hose is fastened a nozzle (to connect at the vehicle exhaust pipe). For double exhaust pipes it is recommended to apply metallic nozzles which automatically closes right after disconnection from the exhaust pipe of the vehicle.

In place of the flange-type fan can be installed a connection ferrule to connect the GLOBAL exhaust extractor with a roof fan instead (which is installed outside the process room).

GLOBAL-H extractors are designed for exhaust extraction from cars, medium-size vehicles, large vehicles and trucks.

5. CAUTION:

1. Accurate selection and diameter of the exhaust hose as well as the size of the extraction fan – are depended on the cubic capacity of the serviced vehicle and its rotational speed;
2. For standard applications are recommended extractors equipped with hoses of thermal resistance 150°C (for a short time 200°C). For vehicles with Diesel engines, equipped with a Euro 5, Euro 6 filter for solid particles, (due to high exhaust fumes temperatures) – are recommended extractors equipped with hoses of increased thermal resistance (GLOBAL H/CF).

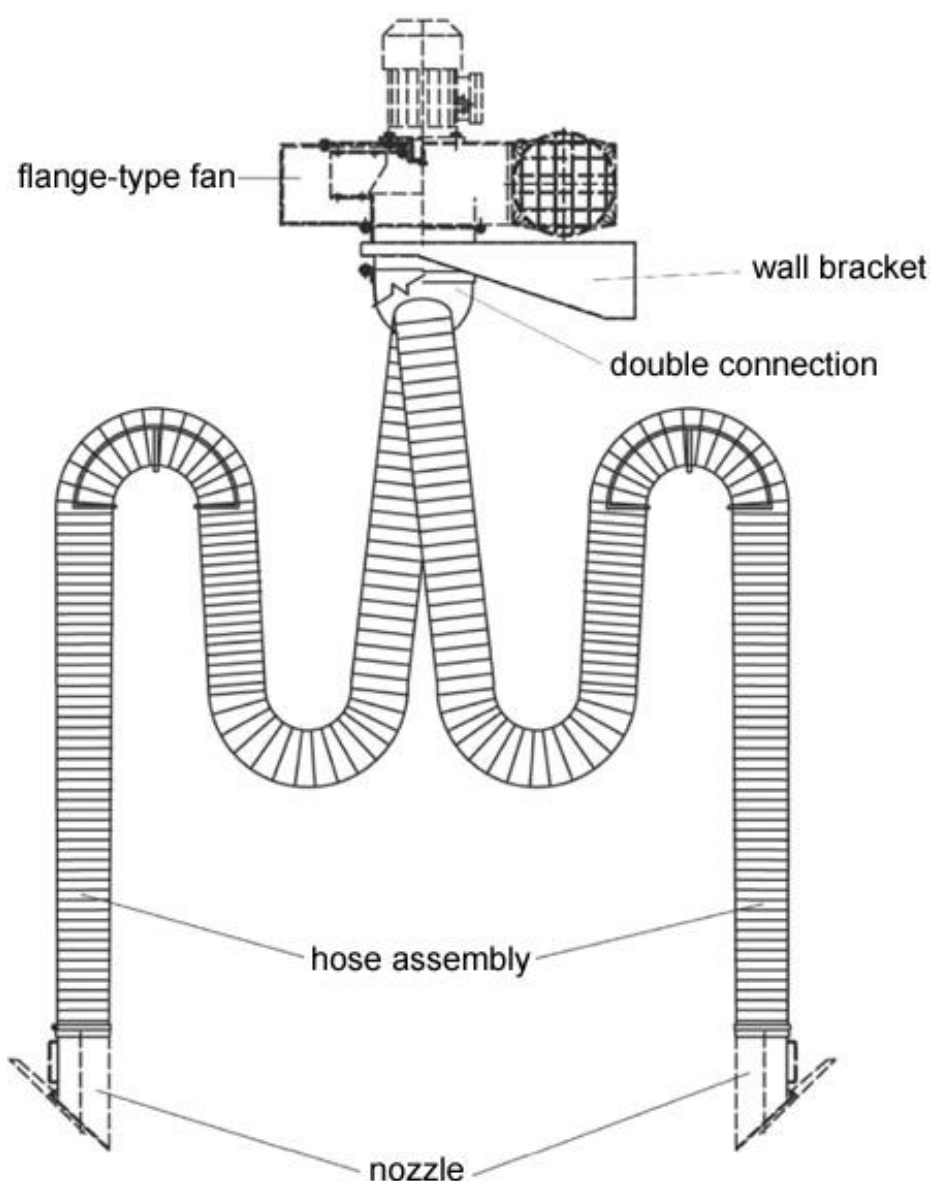
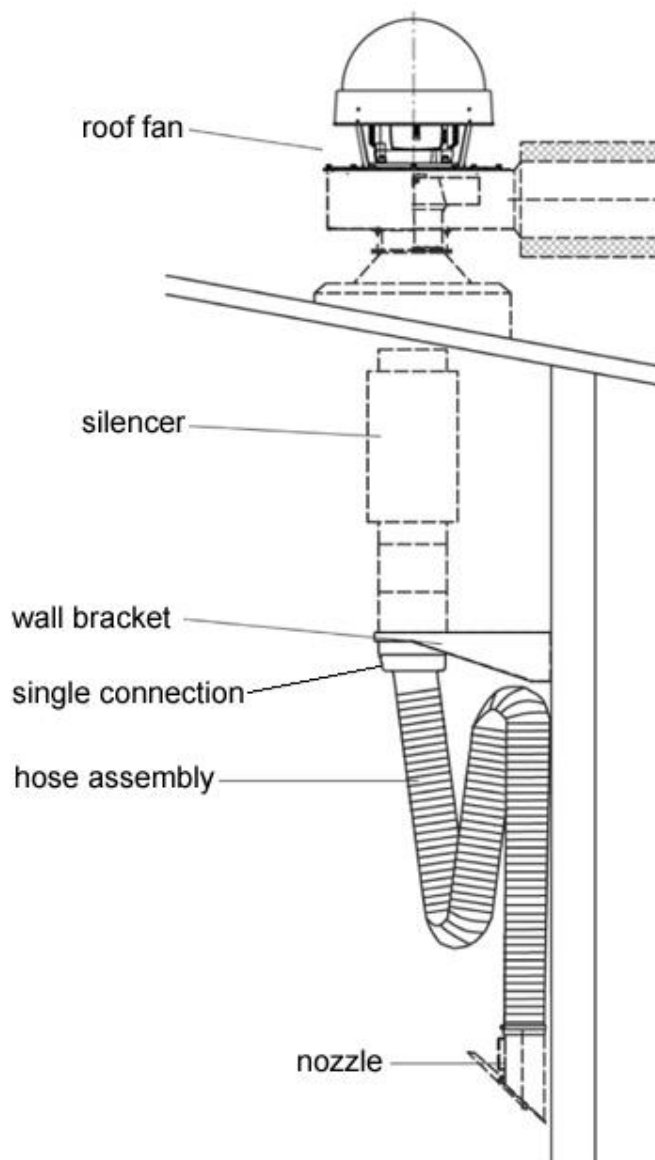


Fig. No.1 – Example of cooperation of the extractor with a flange-type fan



CAUTION: Elements illustrated in an interrupted line are purchased on separate order (additional equipment).

6.

Fig. No.2 – Example of cooperation of the extractor with a roof fan

ASSEMBLY AND STARTUP

Installation height of the GLOBAL system is approx. 3 – 3,5 metres. It ought to be mounted to the wall by means of a wall bracket or to the column through M12 bolts. To the bracket is additionally fastened an extraction fan. In a roof version, to the wall bracket should be connected the ventilation conduit connecting the inlet of the roof fan. The roof fan has to be installed on a roof base BI or BII. To the lower flange of the wall bracket is fastened a spherical divider. The hoses should be fastened at the spherical divider.

The standard length of the hoses is 5 metres. Suction nozzle has to be fixed at the hose end.

A wall hose hanger ought to be installed in a place (in a height) most possible convenient for User, in a point where it is easy to deposit the hose and to take it again by hand. In the wall application, after the device is installed, the fan outlet has to be connected by hose with the ventilation conduit to lead the exhaust volume outside the building. The thermal resistance of the connection is 150°C.

The nozzle is fastened at the vehicle exhaust pipe – the clamping force comes from the lever, clamping knob or a shut-off cover (attracted by a spring) – (depending on the sort of the nozzle). The assortment of the nozzles is shown in Table No.2.

The construction of the nozzle makes impossible to create vacuum in the vehicle exhaust pipe and additionally gives the possibility to insert the measuring probe. The nozzle sucks in the ambient air (false air), mixes it with the exhaust fumes and thereby lowers their temperature.

Connection to the power supply system 230V / 50 Hz – apply motor protective switch with short-circuit- and overload protection. The motor protective switch ought to be installed in a place convenient for User, possibly close to the extractor.

The extraction fan has to be operated by the motor protective switch.

OPERATIONA USE

Construction and the robust execution of the extractor provides its 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, proceed steps as in the section 8.

TROUBLESHOOTING GUIDE

Table No.4

| | Problem | Possible reason | Corrective action |
|-------|--|--|--|
| 7. 1. | Significant and sudden decrease in the intake air volume | Solid element, foreign object being obstacle / barrier for the flow got stuck in the suction nozzle or in the exhaust hose | Localise the obstacle object and remove it |
| 8. 2. | Sudden vibrations of the fan occur | Solid element, foreign object being obstacle / barrier for the flow got stuck within fan impeller | Disconnect the motor and remove the barrier object |
| | | The fan impeller is faulty | Replace the impeller and motor for new |

MAINTENANCE

Once a year of operational use submit the extractor to accurate technical revision during which inspect for subsequent aspects:

- a) check the state of the fan impeller,
9. b) check the state of the fan motor according to the instructions contained in the technical documentation of the motor regarding the revision and repair.

Technical revisions, maintenance and repair of the system ought to be carried out by an authorised person with adequate qualification.

OCCUPATIONAL HEALTH AND SAFETY

10. Start up and the operational use of the rail extraction system are admissible after getting acquainted with the contents of the present Use and Maintenance 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 in range of personal protection from electrical shock and protection from short-circuit- and overload effects.
Any activities referring the connection to the power supply system, must be performed by an authorized person with electrical qualifications. Maintenance and any repair should be performed after the fan is switched off.
- 11.

TRANSPORT AND STORAGE

The hanging extractor ought to be stored in a dry and well ventilated room. Do not put one extractor on top of another. For the time of transport, the extractor ought to be protected from overturn and slide (displacement).

12. The ambient temperature in the place of storage should be not lower than +5°C and the relative humidity not higher than 70%.

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 malfunctions caused by User,
- device failures caused during the use which is in contradiction with the purpose of application and with the present Use and Maintenance Manual,
- malfunctions resulting from the improper transport, storage or incorrect maintenance.

Infringement of the Section 3 "Reservations of Producer" of the present Use and Maintenance Manual and, especially modifications undertaken by User on one's own or use in contradiction with the purpose of application – shall result in the loss of warranty validity.

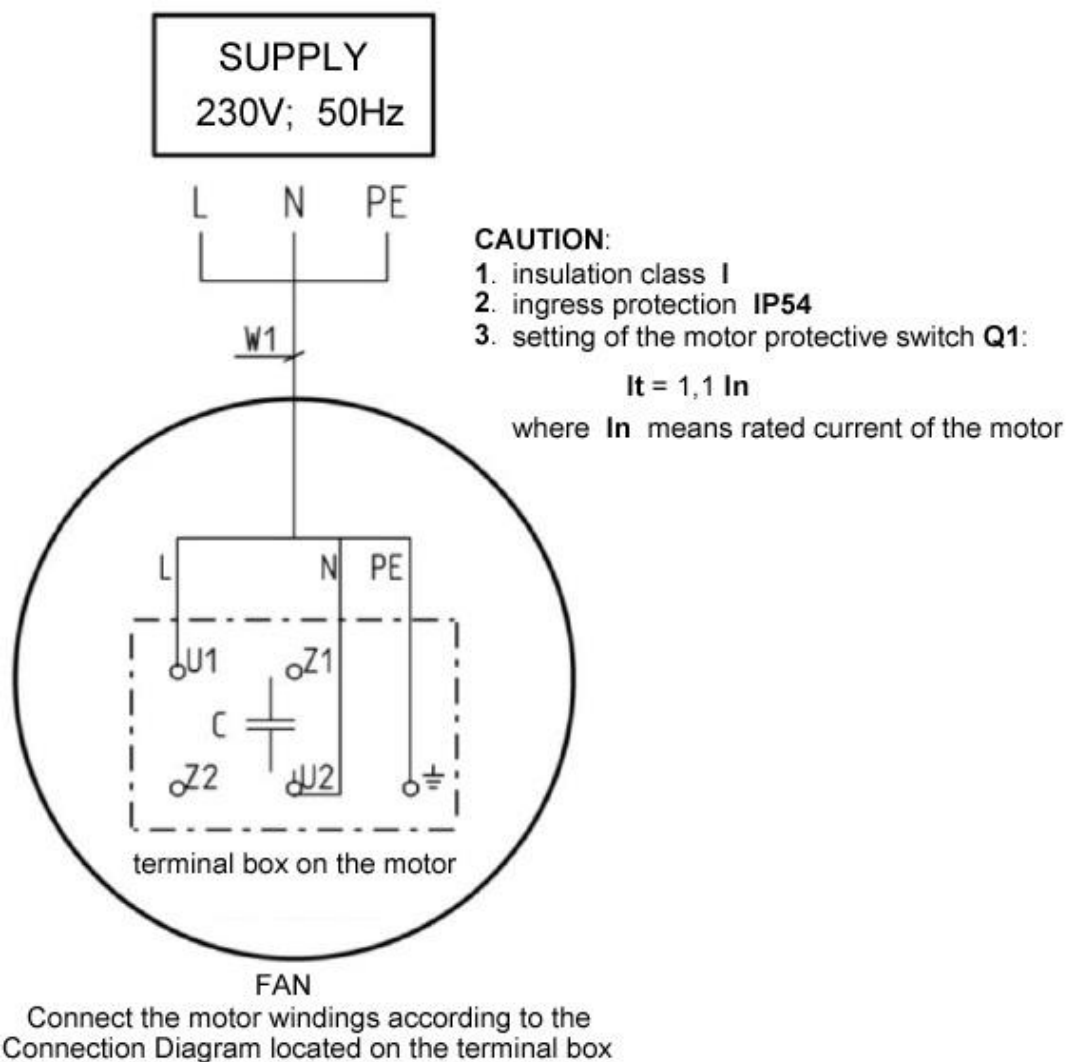


Fig. No.3 – Connection Diagram of the fans for the GLOBAL exhaust extractor

DECLARATION OF CONFORMITY**KLIMAWENT****DECLARATION OF CONFORMITY EC No. _____**

13. Manufacturer (eventually also the authorised representative / importer):

name: **KLIMAWENT S.A.**

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

A person, authorised for issuing the technical documentation:

name and address: Teodor Świrbutowicz, **KLIMAWENT S.A.**

hereby declares that the product: **Hanging exhaust extractor**

type / model: **GLOBAL H**

serial number: _____

year of production: _____

Meets the requirements of the subsequent European Directives:

2006/42/EC Directive of the European Parliament and of the Council of the 17 May, 2006 on machinery, amending the 95/16/EC Directive (recast) / Official Journal EC L157 of the 09.06.2006, page 24);

is in accordance with the requirements of the following harmonised standards:

EN ISO-12100:2012 Safety of machinery – General principles of design – Assessment and reduction of hazard

place, date

*signature of the
authorised person*

*name, surname,
function of the signatory*