User's Manual

Reel Exhaust Extractor
with electrical drive
ALAN-U/E

Contents:

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 **ALAN-U/E Reel Exhaust Extractor with electrical drive**.

Installing, start up and operational use are exclusively admissible after getting acquainted with the contents of the User's 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.

In case of incorrect function of the device, contact the manufacturer or representative.

The construction of the **ALAN-U/E Reel 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 May 17th, 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 February 26th, 2014 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (ranges of the applied voltages).
/ *Journal of Laws EC L96 of 29.03.2014* /

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".

2. Application

ALAN-U/E Reel Exhaust Extractors (with an electrical drive) are designed for effective removal of noxious and hazardous chemical compounds, emitted in exhaust gases of vehicles during diagnostics, adjustment, and engine tests and similar.

They eliminate health hazards and risk of life of the operating personnel, provide clean air at the workplace, thereby giving more safety and comfort. They are used in bus depots, garages and car service stations.
Simple use, ergonomic and economic solution as well as high capture efficiency – are their basic advantages.
The appliances can be installed on a wall, or under the ceiling and this provides efficient organisation at the workplace, (i.e. not being obstacle/barrier for a car lift or high vehicles).
The appliance works with following fans manufactured by KLIMAWENT S.A.:

– built-on fans **FA** – installed directly at the exhaust reel,
– flange-type fans **WPA-E** – installed independently on a separate bracket,
– roof fans **WPA-D**.

3. Reservations of Producer

A. Producer is not responsible for failures arising during the use that is inconsistent to the purpose of application.

B. It is not acceptable to use the Reel Exhaust Extractor with inefficiently functioning extraction fan, as this could cause overheating and damage to the hose assembly.

C. Protect the housing from mechanical damage and from getting polluted with oil and grease.

D. Maintenance and any repair activities can be carried out exclusively by an authorized person, with adequate qualifications.

E. **In the course of operational use, follow the rule – the vehicle engine should not work at maximum rotations for time not exceeding 60 seconds.**

F. During hose winding – observe that the hose is winding onto the reel evenly, regularly to avoid hose clenching.

G. Beforehand installing of the reel extractor check the load capacity of the ceiling, wall (in point where the appliance shall be mounted). Unsure setting of mounting bolts could cause uncontrolled device detachment and risk to User/people in vicinity.

G. Do not introduce Any structural changes or modification of the reel extractor on one's own.

I. Manufacturer is not responsible for wounds, injuries, body laceration – experienced by User or personnel, during the improper operational use.

4. Technical Data

Table No.1

Type of the extractor	Equipped with a shut-off damper	Maximum torsion moment [Nm]	Maximum length of the hose [m]	Diameter of the hose [mm]	Weight [kg]
ALAN-U/E-8	no	40	8	Ø100 Ø125 Ø150	44,5
ALAN/P-U/E-8	yes				
ALAN-U/E-12	no	80	12		46,5
ALAN/P-U/E-12	yes				

Caution:

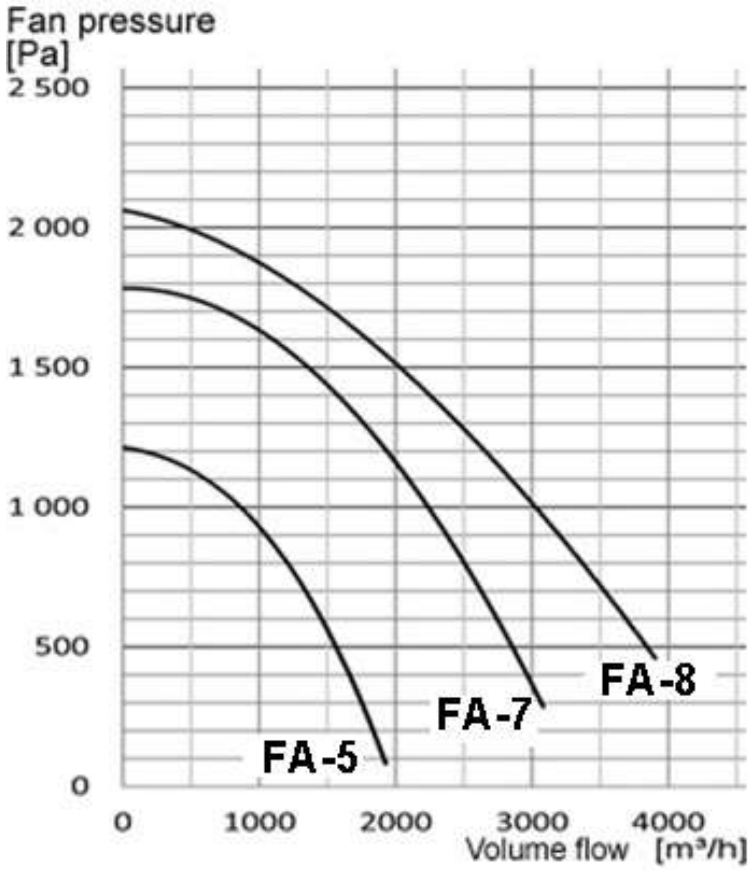
1. Before selecting the size of the Reel Exhaust Extractor contact KLIMAWENT S.A.

2. Weight does not comprise the flexible hose.

Table No.2

Type	Part No.	Supply voltage [V]	Diameter inlet / outlet [mm]	Motor rate [kW]	Acoustic pressure level* [dB(A)]	Weight [kg]
FA-5-1	804W702	230	160 / 160	0,55	55	17
FA-5-3	804W703	3x400				
FA-7-1	804W704	230	160 / 200	1,1	72	24
FA-7-3	804W705	3x400				
FA-8-3	804W706	3x400	160 / 200	1,5	74	31

* Acoustic pressure level has been measured from distance of 5 metres.



Dwg No.1 – Flow charts of the fans type FA

Performances of the hose assemblies for the ALA-U/E reel extractor
Table No.3

Type of the hose set	Hose diameter [mm]	Weight [kg]	Hose length [m]	Recommended volume flow [m³/h]	Flow resistances[1] [Pa]	Thermal resistance [ºC]	Application[4]	Cooperating fans
ZW-8/100	100	5,2	8	400	1100	150[2]	SO	FA-5 WPA-5-E-N WPA-5-D-N
ZW-8/100/CF						300/150[3]		
ZW-8/125	125	6,4	8	700	1200	150[2]	SD	FA-5 WPA-5-E-N WPA-5-D-N
ZW-8/125/CF						300/150[3]		
ZW-8/150	150	7,6	8	1500	1500	150[2]	SC	FA-7 WPA-7-E-N WPA-7-D-N
ZW-8/150/CF						300/150[3]		
ZW-12/100	100	7,8	12	400	1500	150[2]	SO	FA-5 WPA-5-E-N WPA-5-D-N
ZW-12/100/CF						300/150[3]		
ZW-12/125	125	9,5	12	700	1600	150[2]	SD	FA-7 WPA-7-E-N WPA-7-D-N
ZW-12/125/CF						300/150[3]		
ZW-12/150	150	14,8	12	1500	2000	150[2]	SC	FA-8 WPA-8-E-N WPA-8-D-N
ZW-12/150/CF						300/150[3]		

[1] Flow resistances are given for the hose completely wound onto the reel.
[2] Hose of thermal resistance 150ºC (short duration 200ºC).
[3] First hose section is of length 2 m and of thermal resistance 300 ºC (short duration 350ºC); further hose section is of thermal resistance 150ºC (short duration 200ºC).
[4] **SO** – car, **SD** – medium size vehicle, **SC** – truck.

For installing the reel extractor to the wall or column should be applied a wall bracket, delivered on demand of Customer.

For technical data of the fans type WPA-N see the KLIMAWENT S.A. catalogue, in Section “FANS”.

5. Structure and Function

The Reel Exhaust Extractor consists of a winding reel installed in a framework, adapted for mounting under the ceiling or on a wall. The hose (ended with a nozzle) is wound on the reel. For the list of nozzles see the KLIMAWENT S.A. catalogue. The nozzles are delivered on order, as a product adapted for the hose diameter and depending on the Customer’s requirements.
For hose reeling/unreeling is applied an electrical gear motor (inside the reel) of small power and slow rotations. To control the gear motor and the fan is applied the ZE-ALAN-U/E control unit.

The nozzle has to be clamped at the exhaust pipe of the serviced vehicle. Additionally, the nozzle is sucking also the ambient air, mixing it with the exhaust volume and therefore lowering the temperature of the exhaust fumes.
The reel is mounted in slide bearings in the side support walls of the framework. A grease nipple is located on the right wall of the framework. Whereas, on the left wall of the frame is placed the outlet of the extractor. To the outlet can be installed a built-on FA-type radial fan (delivery on separate order). The fan is directly fastened to the ALAN extractor.

The outlet of the extractor (or of the **FA**-type fan) ought to be connected with a rigid ventilation conduit to discharge the exhaust volume outside the process room.
Section and length of the ventilation conduit (connecting the fan outlet) should be selected in such a way that the minimum flow at the nozzle is not lower than the value given in the Section 4 “Technical Data” – recommended extraction volume.

Additionally, the Reel Exhaust Extractor can work with a stand fan – **WPA-E-N** mounted independently on a wall bracket or with a roof fan – **WPA-D-N**.

The reel extractors can be equipped with a shut-off damper that opens- and closes automatically during the coiling / recoiling the hose onto the reel.
Therefore a smaller extraction fan can be applied (in the system where the extractor is connected to the main collecting ductwork – whereby coincidence factor is lower than 1).

In each version the free hose overhang, (in a state when the hose is fully recoiled on the reel), should be from 1,5 up to 2 meters.

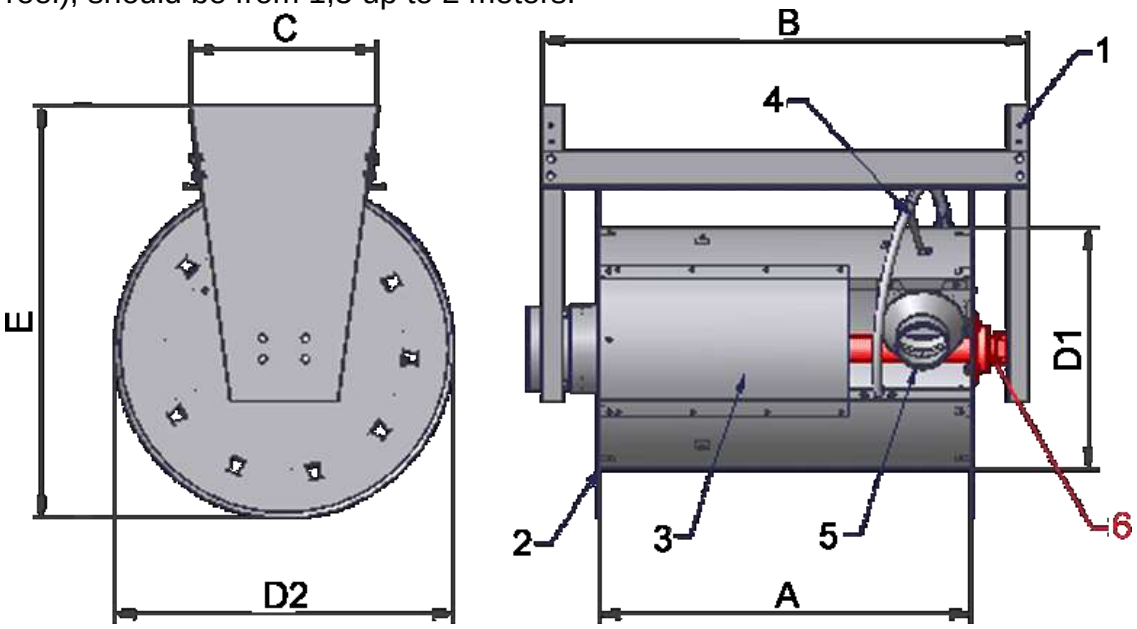


Table No.3

Type	Dimensions					
	A	B	C	D1	D2	E
U/E-8	775	998	355	450	640	780
U/E-12	1000	1222	355	450	640	780

1. Supporting framework wall
2. Hose reel
3. Reel cover
4. Guiding spiral
5. Connection fitting piece
6. Tubular gear motor

Dwg No.2 – Reel Exhaust Extractor ALAN-U/E – Description, dimensions

6. Assembly and Start-up

ALAN-U/E-type extractor is being supplied in following assemblies:

- hose reel – along with the tubular gear motor and frame structure,
- hose assembly – lengths 8 m or 12 m; diameters Ø100, Ø125 or Ø150 mm.
  The hose assembly consists of:
  - flexible hose G-EX1,
  - hose clamps,
  - hose clamp cover – made of rubber;
- nozzle, (nozzles).

Additionally, upon separate order, can be delivered extraction fans of various types i.e.:

- built-on fans type **FA** – installed directly to the extractor reel;
- stand fans **WPA-E**
- roof fans **WPA-D**
- ventilation accessories such as ventilation conduits (flexible or rigid), wall brackets, roof bases, etc.

Prior to installing the reel, check the tightness of screw connections of the framework and the assembling correctness of the reel extractor itself.

INSTALLING THE BUILT-ON FAN TYPE FA

The fan is installed to the let framework wall. During the installing carry out subsequent steps:

1. Put the sealing ring onto the outlet fitting piece of the extractor.

2. In the lower part, screw out the 2 bolts (that are fastening the stable bush to the left wall), put the fan support and crew up with the same bolts the support, stable bush and the framework wall together.

3. Put the fan with motor on the extractor outlet in such a way that the holes of the hanger (in the upper part of the fan) are matching the holes in the left framework wall and the hole in the support is suitable with the hole in the fan housing. The fan inlet should be placed evenly on the sealing ring.

4. Finally, screw up the fan with the extractor: 4 bolts screw to the hanger, 1 bolt to the support (altogether 5 bolts M8x20).

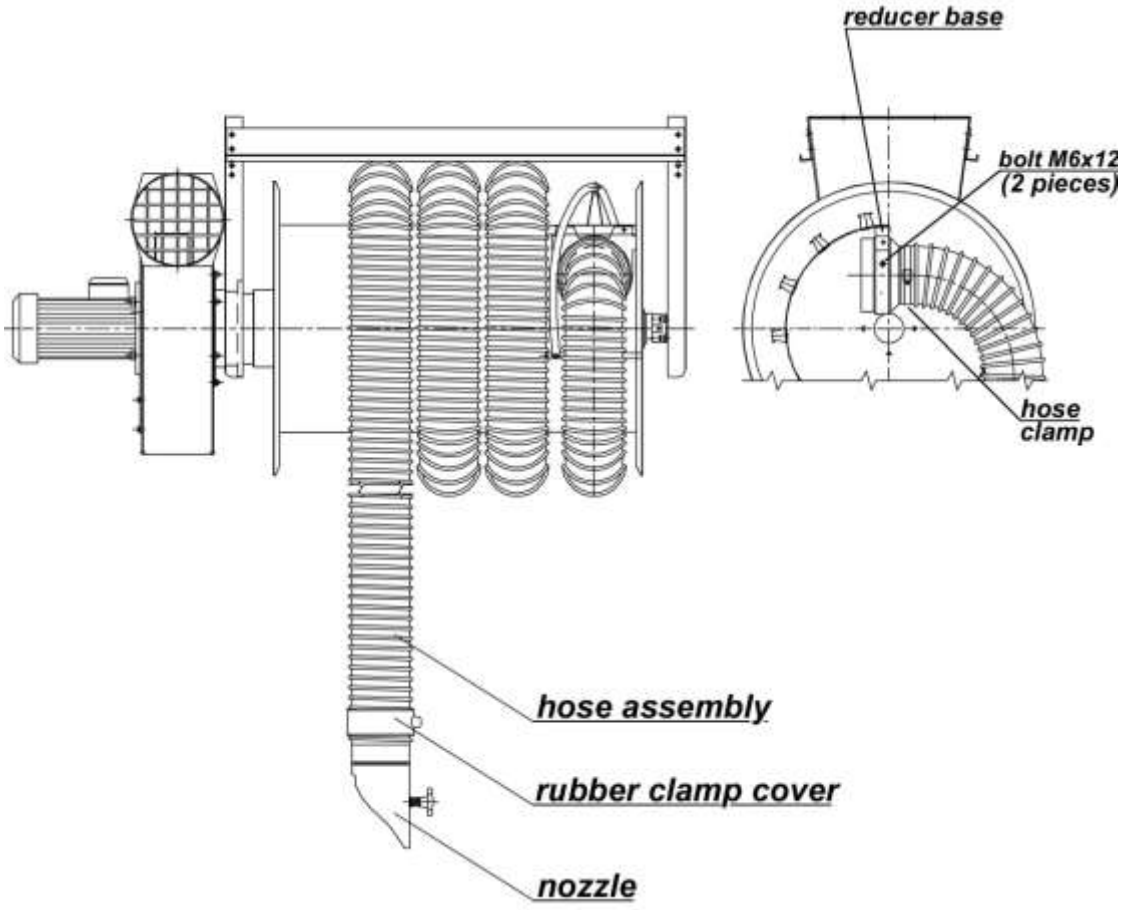
FASTENING OF THE HOSE ASSEMBLY TO THE REEL

1. Set (turn) the reel into position that is convenient for installing the hose assembly.

2. Inside the reel – install the hose assembly – screw up the reducer to the reducer base with 2 bolts (see Dwg No.4 “Installing the hose assembly”).

3. Fasten the nozzle to the hose with a clamp, additionally guard the clamp with a rubber clamp cover.

4. Finally, turn slowly (by hand) the reel until the hose assembly is completely wound on the reel.



Dwg. No.3 – Installing of the hose assembly

ALAN with the shut-off damper
Assembly instruction – connection "Hose-reel"

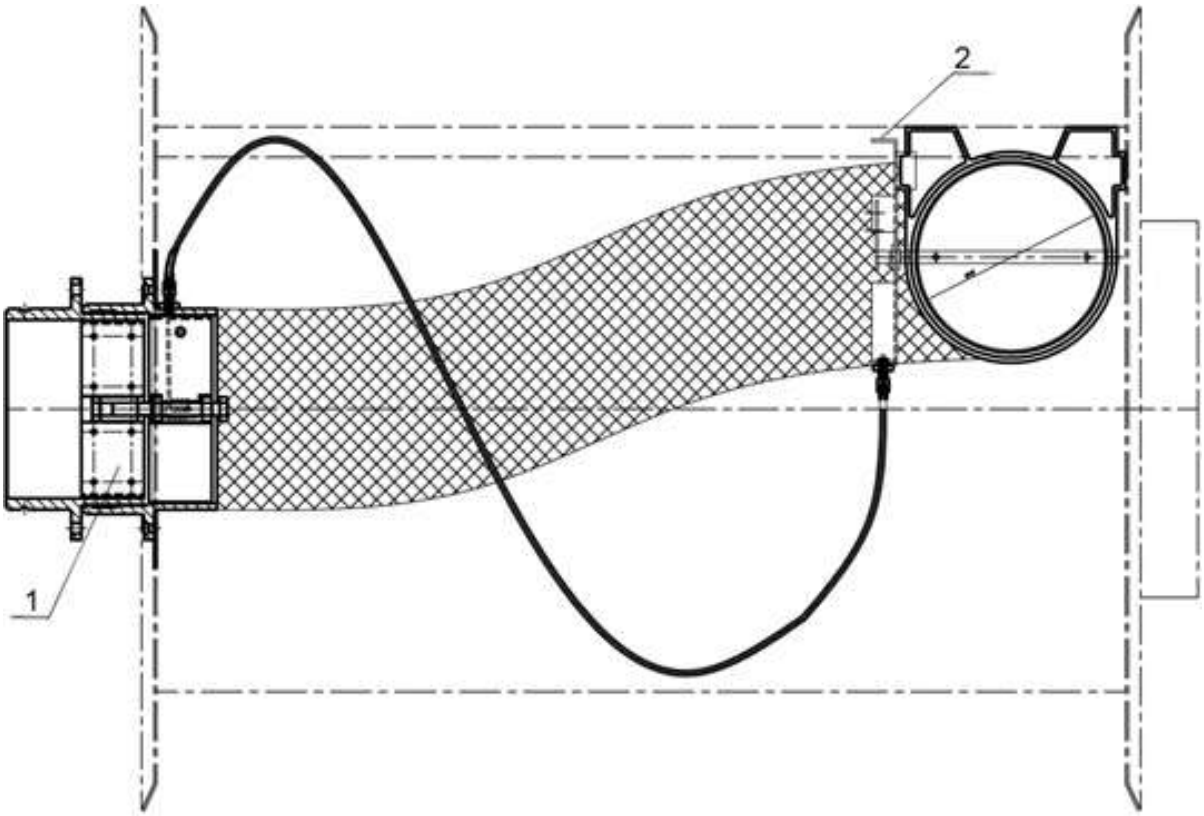
CAUTION:
Do not turn the reel in direction of hose coiling, after the shut-off damper is closed. Further rotating of the reel (in direction of "hose wind onto the reel") will stretch the line and shall damage the line conduit, and additionally lead to the interruption of the line itself. The reel position (at the closed shut-off damper) is the limit position for the fully coiled hose onto the reel. In the course of a hose wind-down the line is getting slack, and the spring opens the shut-off damper.
The shut-off damper opens completely when the reel makes 1,5 up to 2 rotations.

Connection of the hose:
The hose ought to be fastened (after the reel is rotated in direction of "hose wind-down") – whereby the necessary rotation quantity depends on the requested hose length to be coiled onto the reel – counted from the point when the shut-off damper is closed.

Having fastened the hose, turn the reel by the same quantity of rotations.

CAUTION:
In case when the hose length (which is wound onto the reel) must be changed, repeat the above mentioned steps.

SHUT-OFF DAMPER



1. Counting mechanism
2. Mechanism of the shut-off damper

CAUTION: Settings of the counting mechanism and of the line tension should be executed after the tension of the spiral spring (of the right disk assembly) gets fixed and the reel position with wound on hose becomes stabilised.

Dwg. No.4 – Shut-off damper with the tensioning line

HOW TO CHANGE THE SPRING TENSION:

Once the reel is blocked from rotation, from the side of the counting mechanism *(pos.1 Dwg.No.4)* pull out the nut housing *(pos.3 Dwg.No.5)* after releasing the nut *(pos.7)* and screwing in the bolt *(pos.6 Dwg.6)*.
Having pulled out the nut housing *(pos.3 Dwg.No.5)*; you can change the tension of the winding spring by turning the reel in direction of “hose wind down”.

After the spring tension is properly adjusted and the device is in position of correctly coiled-on hose, (when the rubber thrust ring is blocked on the support) we are able to adjust the counting mechanism.

1. Wind down the hose by a 1,5 hose winding (coil).

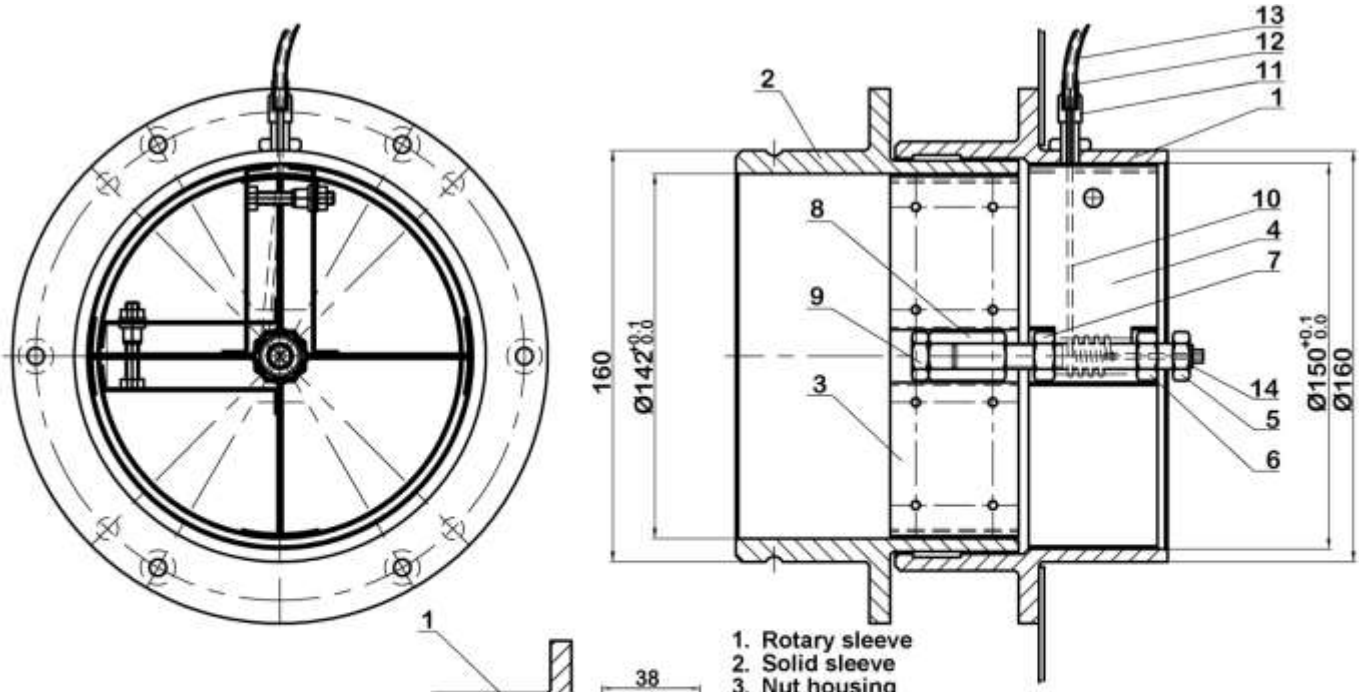
2. Screw on the nut (pos.8) with the bolt (pos.9) to tight, onto the bolt pos.5 Dwg.5.

3. Fasten the housing of the counting nut pos.3 – so that it sleeves onto the counting nut (pos.8 Dwg.5) – to the position as in the drawing.

4. Block the nut housing by screwing out the bolt (pos.6 Dwg.6) and we block it by means of a nut (pos.7. Dwg.6).

The device is adjusted and after the hose is coiled onto the reel, the shut-off damper closes.

CAUTION:
In case when the spring tension is changed, repeat these steps.

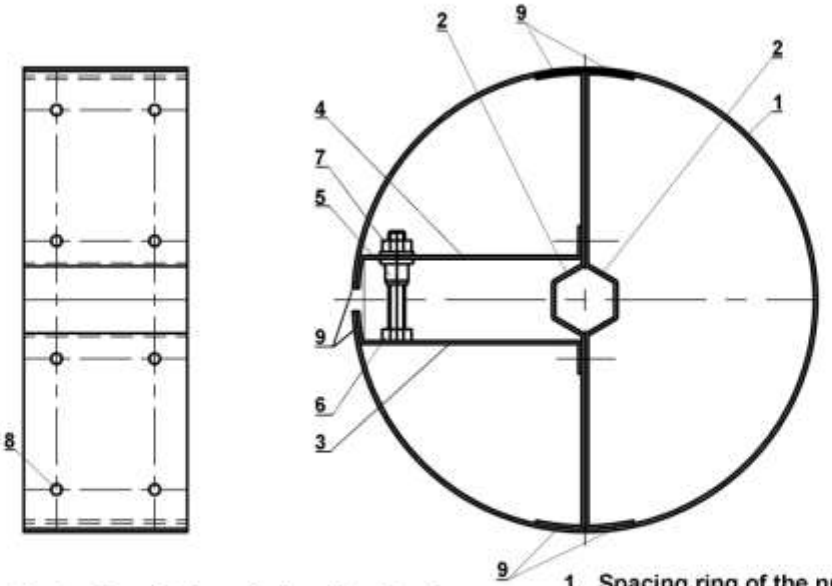


1. Rotary sleeve
2. Solid sleeve
3. Nut housing
4. Bolt housing
5. Special screw
6. Guide sleeve
7. Special nut
8. Counting nut
9. Thrust bolt M10 L=10
10. Solid cable (from the bicycle gear)
11. Adjustment screw of the cable armouring
12. Termination of the cable armouring
13. Armouring of the gear cable 1,7m
14. Thrust sleeve (open-end rivet SP 4,8x14)

Caution:

1. In Pos.1 make a hole M7 according to the drawing.
2. Adjustment of the caounting mechanism and the line have to be executed after the ultimate settings of the reel get stabilised.
3. In case the reel settings are changed, it is necessary to re-adjust the counting mechanism and of line tension.
4. Pos.14 make of an SF 4.8x14 rivet by discarding the steel stud.

Dwg. No.5 Counting mechanism



CAUTION:

1. Pos.5 rivet together to Pos.4 before riveting it to Pos.2.
2. Screw Pos.6 into Pos.5 before riveting it to Pos.3.

1. Spacing ring of the nut
2. Support ot the nut
3. Distance support ot the nut I
4. Distance support ot the nut II
5. Rivet nut SFM 5-30
6. Bolt with hexagon head ISO 4017-M5x30-5.6
7. Nut ISO 4032-M5-6
8. Open-end rivet SF 3.2x6
9. Open-end rivet SS 3.2x6

Dwg. No.6 Nut housing

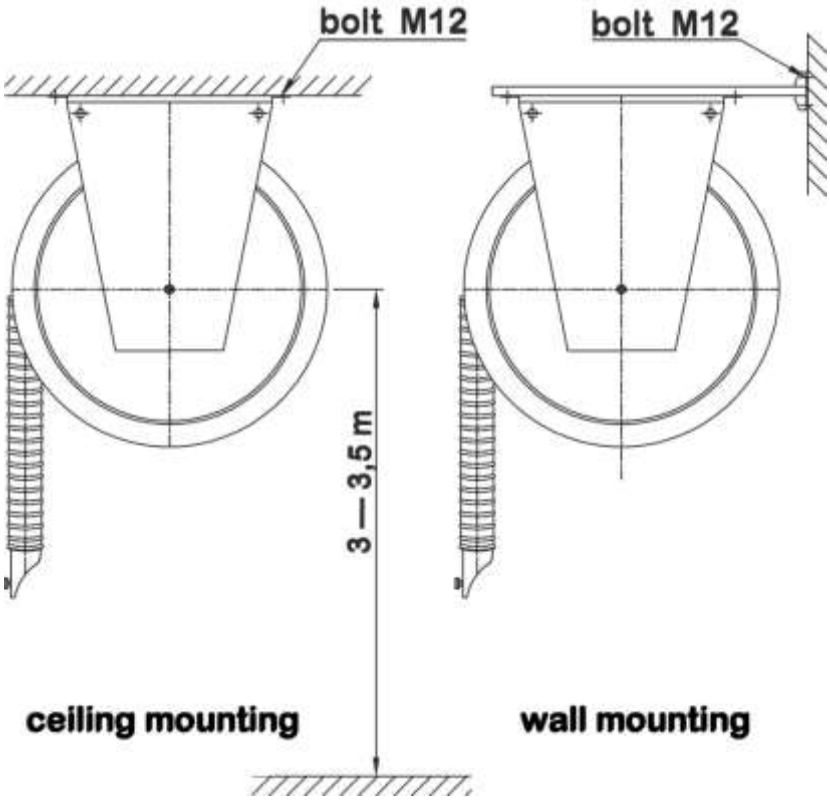
MOUNTING THE EXTRACTOR AT THE WORKPLACE

The Reel Exhaust Extractor can be installed to the ceiling, or by means of brackets to the wall or a supporting column. Before installing check the load capacity of the constructional elements of the building (wall, floor) where the extractor has to be installed.
The optimum mounting height of the extractor should be from 3 up to 3,5 metres.
For mounting use bolts M12 class 5,6.
Important is that the reel axis is positioned horizontally.

To install the reel extractor at the work place, carry out following steps:

1. Lift the assembled device to the suitable height and mount it to the ceiling or wall, in the prepared place (Caution – the weight of the assembled device can reach 100 kg).

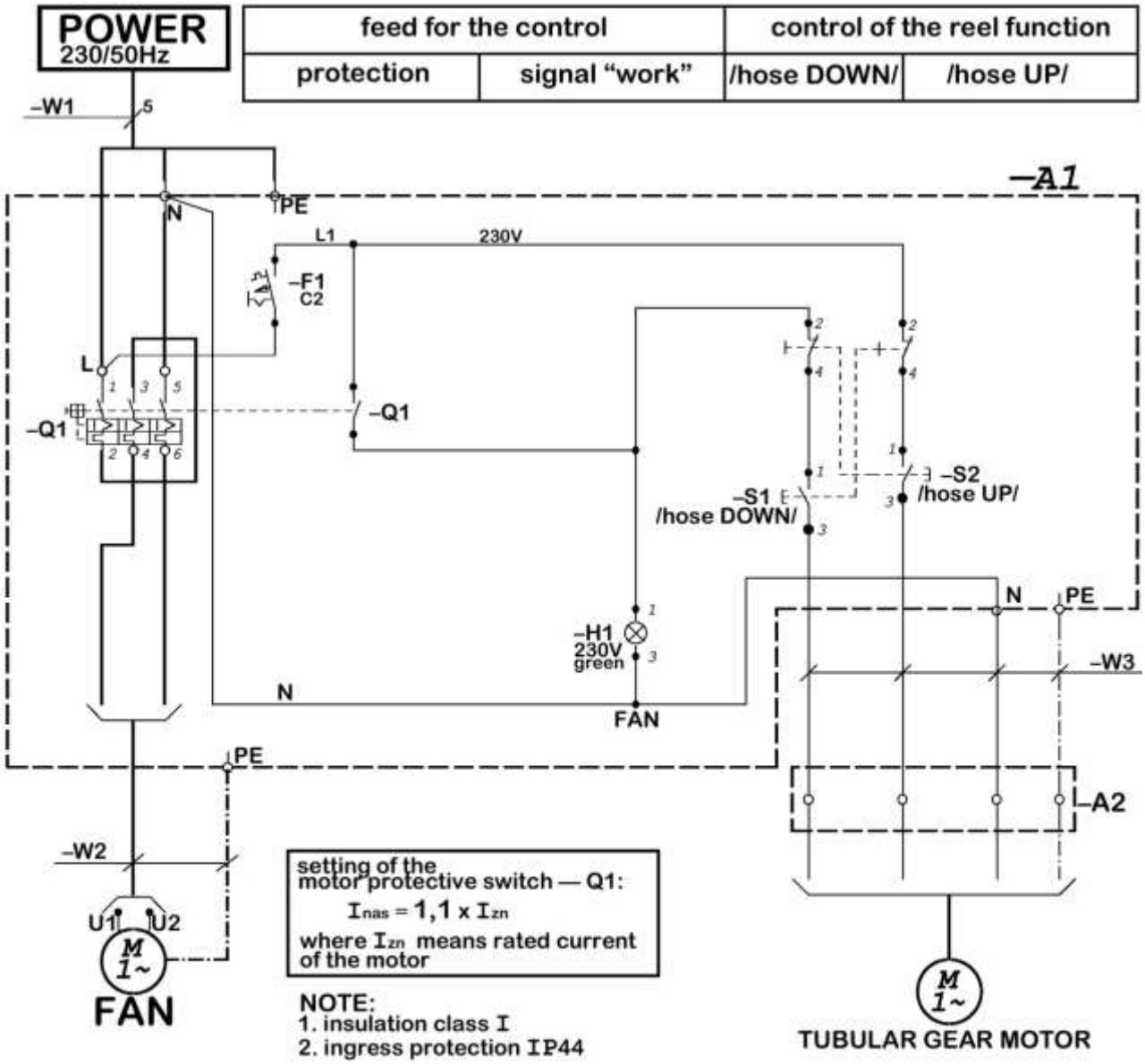
2. Carry out the adjustment of coiling/recoiling of the hose assembly, after connection of the power supply and of the ZE-ALAN-U/E control unit.
The adjustment is described in Section 7 of the present ***User's Manual*** ("Operational Use").



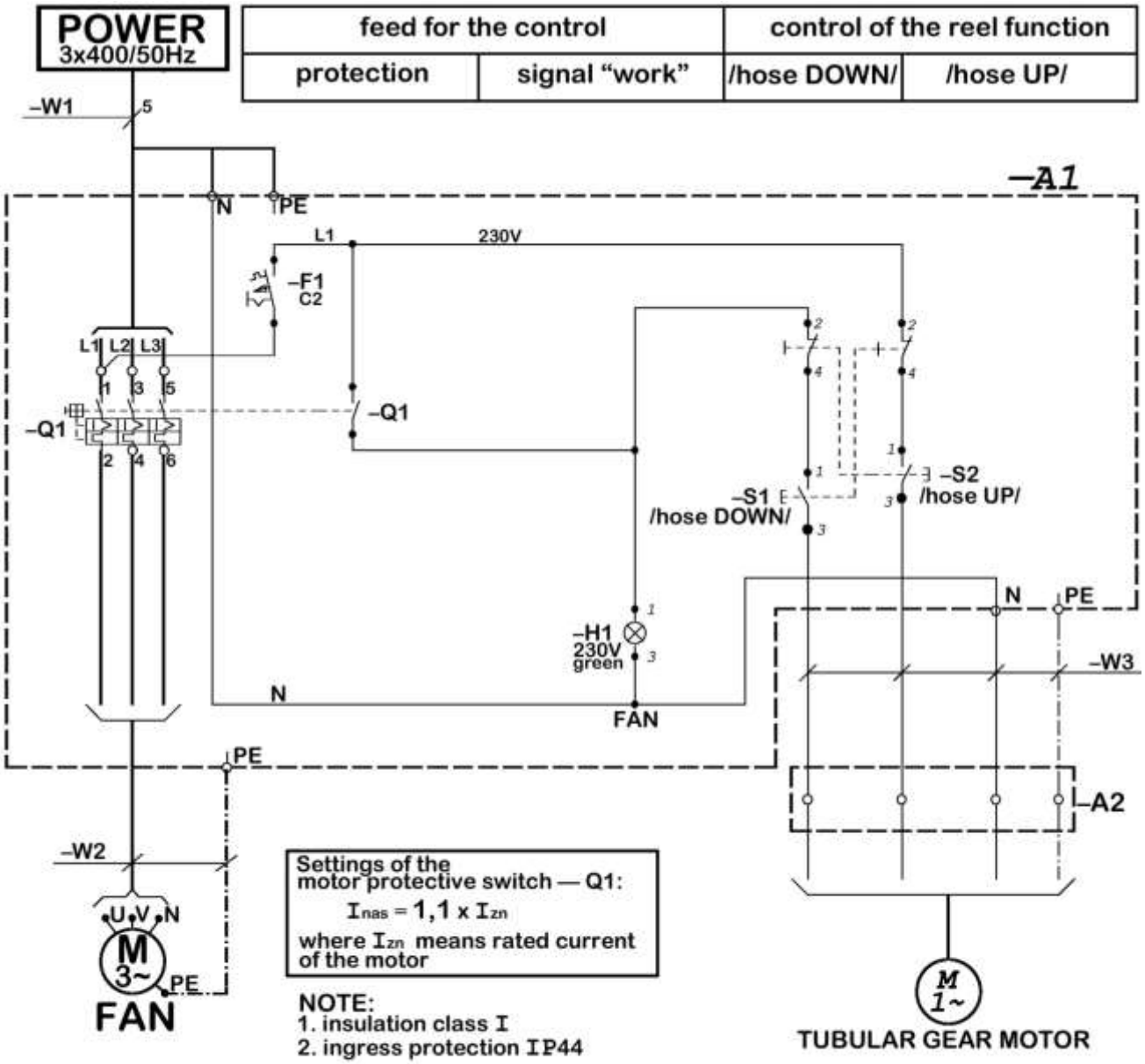
Dwg No.8 – Mounting positions

After the extractor is mounted under the ceiling or on the wall, it is important to fasten the connection fitting piece of the reel (application without the fan), with the ventilation conduit, discharging the exhaust volume outside the process room.
When the extractor is equipped with a fan type FA, connect the fan outlet with the ventilation discharging ductwork, using a short section of flexible hose. Depending on the diameter of the fan connection, the ventilation conduit must have diameter Ø160 mm or Ø200 mm.

To prepare the device for operational use, carry out the electrical connections of the fan motor and the ZE-ALAN-U/E control unit (according to the enclosed Connection Diagram).
Remember to connect the protective cable to the PE terminal in the control box.
The control unit must be installed near the device in a convenient place for User.
After all the connections are carried out, and after the start-up of the fan, check the **correctness of impeller rotation sense of the fan – concerns to the fan with three-phase motor. The impeller rotation sense should be according to the arrow on the fan housing.**



Dwg No.9 – Connection diagram of the control system and power supply 230V



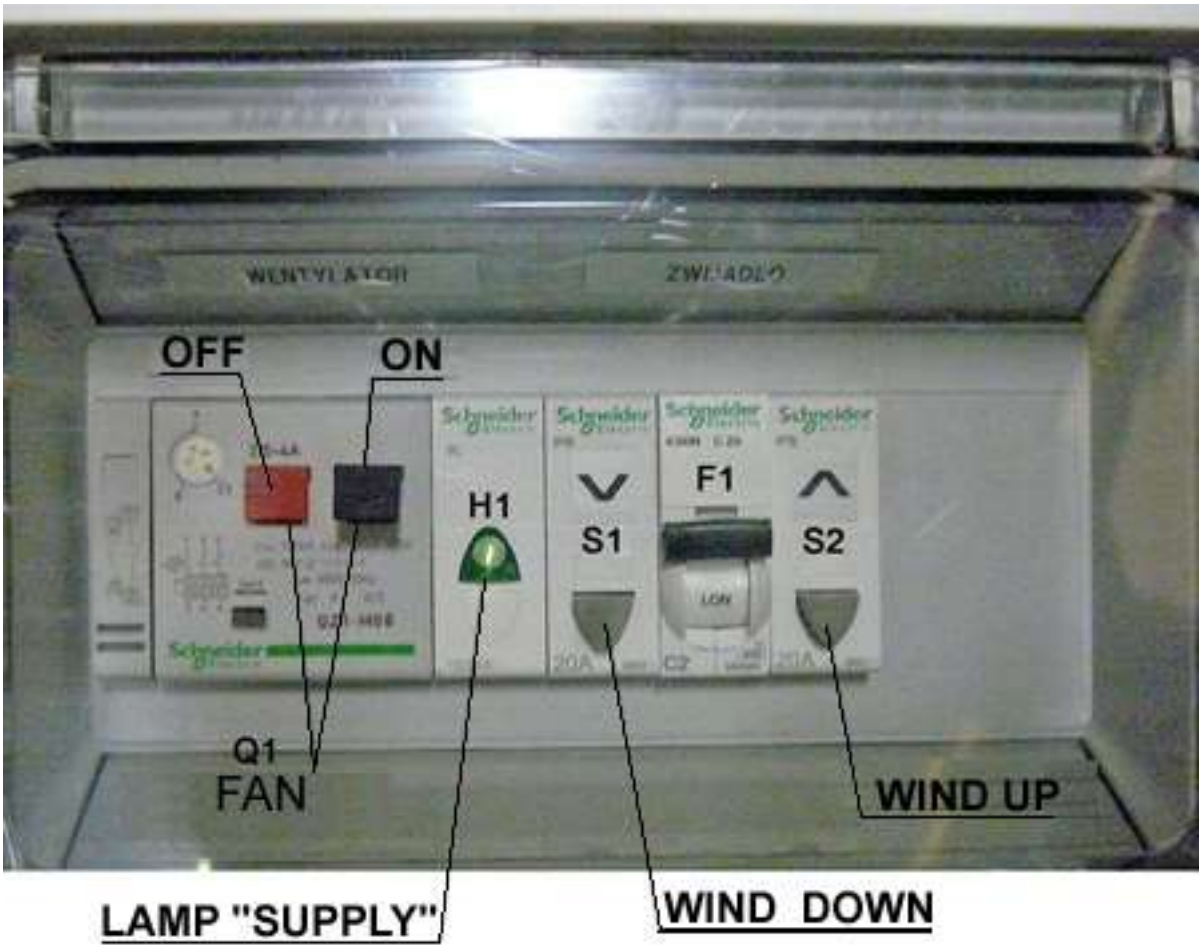
Dwg No.10 – Connection diagram of the control system and power supply 3x400V

7. Operational Use

The ZE-ALAN-U/E control unit serves to switch on and off the fan and to control the hose coiling/recoiling.
The motor switch protects the fan motor from overload and short-circuit, non-complete-phase work and start-up-blocking.
Depending on the fan size, we apply adequate control unit.

Table No.5 – List of control units ZE-ALAN-U/E

Type of the control unit	Supply voltage [V]	Motor rate [kW]	Current range [A]	Fans to be applied with
ZE-ALAN-U/E-6,3-1	230	0,55	4,0-6,3	FA-5-1, WPA-5-D-1/N, WPA-5-E-1/N
ZE-ALAN-U/E-1,6-3	3x400	0,55	1,0-1,6	FA-5-3, WPA-5-D-3/N, WPA-5-E-3/N
ZE-ALAN-U/E-10-1	230	1,1	6,3-10	FA-7-1, WPA-7-D-1/N, WPA-7-E-1/N
ZE-ALAN-U/E-4-3	3x400	1,1; 1,5	2,5-4,0	FA-7-3, FA-8-3, WPA-7-D-3/N, WPA-8-D-3/N, WPA-7-E-3/N, WPA-8-E-3/N



Dwg No.11 – Control unit – ZE-ALAN-U/E

In order to use safely the Reel Exhaust Extractor correctly execute subsequent steps:

1. **Start the extraction fan using the motor disconnector Q1 in the ZE-ALAN-U/E control unit (black button). This will be indicated by the H1 lamp.**
2. Press the **S1** push-button ”reel DOWN the hose”. The reel starts rotations, the hose assembly begin winding down to the requested work length.
   Any time when User releases this button – the reel stops its rotations.
   The reel continues its rotations after the **S1** button is pressed again.
3. Connect the suction nozzle at the exhaust pipe of the serviced vehicle.
   Now is appropriate time to start the vehicle’s engine.
4. After the completed extraction, stop the vehicle engine and disconnect the suction nozzle from the exhaust pipe of the serviced vehicle.
5. By pressing the **S2 pushbutton** “reel UP the hose” the hose-assembly is being wound up onto the reel. Pay attention that the hose is recoiling regularly (evenly) on the reel.
6. Having completely recoiled the hose onto the reel, switch off the extraction fan by means of the **Q1** motor disconnector (red button).

To obtain the most efficient function of the reel extractor, carry out the adjustments:

ADJUSTMENT:
For this purpose are setting wheels of the limit switches on the right framework wall of the reel. Use here the enclosed “setting comb”. The quantity of rotations
of the setting wheel depends on the diameter and length of the hose assembly.

How to set the “hose wind up” onto the reel:

- turn the **black** wheel right (clockwise) „**–**” to reduce the reel rotation number,
- turn the **black** wheel left (anti-clockwise) „**+**” to increase the reel rotation number.

How to set the “hose wind down” from the reel:

- turn the **red** wheel right (clockwise) „**+**” to reduce the reel rotation number,
- turn the **red** wheel left (anti-clockwise) „**–**” to increase the reel rotation number.

By setting (manoeuvring) these wheels User obtains the most useful adjustment of the reel.

8. Trouble Shooting Guide

Table No.6

	Problem	Possible reason	Corrective action
1.	Sudden and significant drop in intake volume flow.	Solid object, foreign object being obstacle for the flow got stack at the nozzle or in the hose.	Localise the object and remove it.
2.	The hose got overheated and damaged.	The engine of the serviced vehicle is running at full rotations for too long time or the engine cubic capacity is too high.	Do not exceed 60 seconds of continuous work at maximum rotations. Replace the damaged hose for new. Replace the impeller and motor for new.
3.	Sudden vibrations of the fan are occurring.	An object got stuck within the impeller and this is obstacle to the air flow.	Disconnect the fan from the power supply and remove the object.
		Impeller is defective.	Replace the impeller and motor
4.	Drop in the flow efficiency of the fan.	Improper impeller rotation sense	Change the phase connection sense (this refers the three-phase motor only).

9. Maintenance

The construction of the Reel Exhaust Extractor and of the fan enables their operational use without the continuous technical supervision.
Any revisions and repair are admissible to be executed by an authorized person.

In case any defective function or failure is visually or by noise noticed, undertake technical revision. During the maintenance check the mechanical and electrical connections.

Any technical revisions of the fan can be carried out exclusively when the system is disconnected from the power supply system (isolating switch).

Once a year, examine the fan motor. Among others, check the state of the bearings, measure the resistance of the motor winding insulation, and the protective circuit resistance. Protect the exhaust hose from getting polluted with oil and lubricating grease and, first of all, from squeezing with wheels of vehicles.

It is inadmissible, to use the system with faulty functioning extraction fan, because hose overheating and damage could occur.

10. Occupational Health and Safety

Start up and the operational use of the Reel Exhaust Extractor are admissible after getting acquainted with the contents of the present User's Manual.
The Reel Exhaust Extractor will not cause any risk under the condition it is firmly installed under the ceiling, wall or other constructional element of the building.

Connection to the power system ought to be carried out exclusively by the authorised person.

The fan motor has to be connected to the electrical wiring – according to the present regulations within the range of personnel protection from electric shock and overload, short-circuit effects.
In case of fans with three-phase motors, necessarily examine the impeller rotation sense (it should be according to the arrow on the fan housing.
Before installing of the extraction system check the load capacity of the ceiling, wall (in place where the system shall be mounted), unsure installing could cause uncontrolled device detachment and risk to User/people in vicinity

Any activities of repair and technical revision must be carried out after the fan is switched off and the system disconnected from the power supply system.

For safety reasons, while the hose is recoiled onto the reel, User should hold the nozzle by hand until it is completely wound on the reel. Therefore, the hose is winding evenly and not getting jammed.

11. Transport and Storage

The device ought to be stored in a dry and well ventilated room. It should be placed in horizontal position, with the winding reel upwards, on 2 wooden beams 60x60x500 mm.

It is not acceptable to store one reel extractor on top of another (do not stack).
For the time of transport it has to be placed in a way described above, in a cardboard package and foil and protected from an uncontrolled displacement and overturn.
During transporting and storage, the accessories of the extractor (e.g. hose assembly) ought to be placed in foil and cardboard

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 "***User's manual***",
- damages being effected during improper transport, storage or incorrect maintenance,

Infringement of the section 3 "Reservations of producer" of the User's Manual and especially modifications undertaken by User on one's own shall cause the loss of warranty validity.

..... we create our devices with passion

KLIMAWENT

DECLARATION OF CONFORMITY No. .....

Manufacturer (eventually the authorized representative / importer):
name: **KLIMAWENT S.A.**
address: **81-571 Gdynia**,

A person authorized for issuing the technical documentation:
name and address:

hereby declares that the appliance:
name: **Reel Exhaust Extractor**

type/model: **ALAN-U/E-8**; **ALAN/P-U/E-8**; **ALAN-U/E-12**; **ALAN/P-U/E-12**
serial number: ..... year of production: .....

meets the requirements of the subsequent European Directives:

- **2006/42/EC Directive** of the European Parliament and Council of May 17, 2006 – for machines – amending the 95/16/EC directive (recast); */ Journal of Laws EC L 199 of 2008 /*
- **2014/35/EC Directive** of the European Parliament and Council of February 12, 2014 on harmonizing the legislation of the Member States – relating to ranges for the applied voltage */ Journal of Laws EC L96 of 26.03.2014 /*

meets the requirements of following harmonized standards:

- **EN ISO-12100:2012** Safety of machinery – Basic concepts, general principles for design. Risk assessment and risk reduction.
- **EN 60204-1:2010** Safety of machinery – Electrical equipment of machines. Part 1: General requirements.

.....	.....	.....
place, date	signature of authorised person	name, surname, function of the signatory

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District Court Gdańsk-Północ
in Gdansk, VII Wydział Gopsodarczy
Krajowego Rejestru Sadowego
KRS 0000308902 Kapitał Zakładowy
13.779.200 zł. opłacany w całości

NIP: 958 159 21 35
REGON: 220631262
Bank account: **Bank Zachodni WBK S.A.**
I Oddział KB S.A. w Gdańsku
56 1500 1025 1210 2007 8845 0000

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Producer:
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804O13 ALAN-U/E-8,12 21.01.2016/EN
804O75,76 ALAN/P-U/C-8,12 21.01.2016/EN

Gdynia, 21.01. 2016