

## ALAN-N – reel exhaust extractor



ALAN-U/C-12-N



### Purpose

Reel Exhaust Extractors – type ALAN-N are designed for efficient extraction the exhaust fumes, emitted by vehicle exhaust pipes during the engine tests, adjustment and diagnostics. They are applied in depots, garages and car service stations. Due to economic optimal air extraction volume and simple use, they capture the whole exhaust amount and removes it outside. The reel extractors can be mounted both, directly under the ceiling or to the wall or to column by means of wall brackets. The extractor works with following fans produced by KLIMAWENT:

- built-on fans – type FA – mounted directly to the device,
- fans – type WPA-E-N – mounted independently on the wall bracket,
- roof fans – type WPA-D-N.

### Structure

The reel exhaust extractor consists of a winding reel with the (wound on) exhaust hose with a nozzle to connect at the vehicle exhaust pipe. The nozzle draws in the ambient air, mixes it with the exhaust fumes decreasing their temperature. Exhaust extractors are adapted for hoses of diameters 100 (for cars) 125 (for vehicles of admissible total weight – up to 3,5 t) or 150 mm (for trucks). Hose diameter selection is depended on the engine cubic capacity of the serviced vehicle and its rotational speed. For more precise selection contact KLIMAWENT S.A. In all extractor versions, the free overhang of the hose (entirely wound on the reel) is 1,5 to 2 m. The devices are produced with two sorts of reel drive:

1. Type C – spring drive for hose reeling. The hose is wound down manually and reeled up automatically, upon the force of a spring mechanism. To the equipment set belong following elements:

- band brake – to slow down the hose speed during winding-up,
- ratchet device – which locks the hose in the required position (while it is being wound down),
- rubber stopper – to be fixed on the hose, stops the hose after it is fully wound up onto the reel.

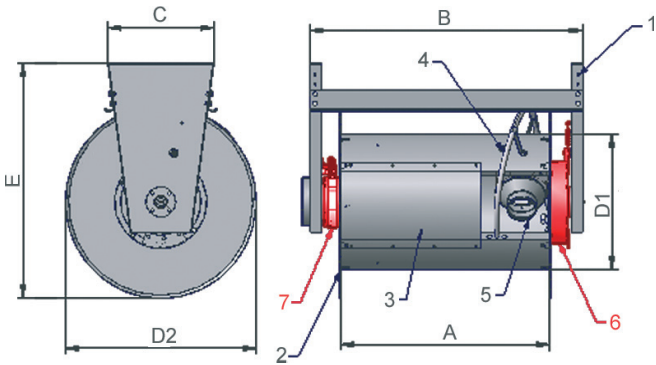
2. Type E – with electrical drive for "hose wind-UP/DOWN". Inside the reel is located a gear-motor (of small motor power and low rotations).

As option, both types can be equipped with a shut-off damper which automatically opens and closes during reeling/unreeling of the hose. Therefore it is possible to apply a smaller fan when the reel extractors are connected to one main collecting ductwork, and the use coincidence factor is lower than 1.

#### NOTE:

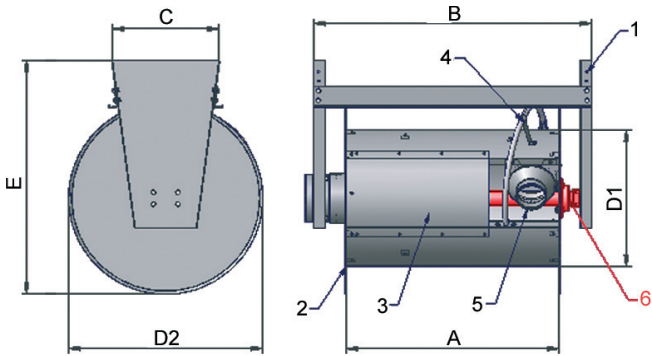
1. For fans working with spring driven reel extractors type C use electrical equipment described in section FANS. For fans, working with motor driven reel extractors type E, use the control unit – type ZE, additionally serving for reel control "hose wind-UP/DOWN".
2. For standard applications, we offer ZW hose sets of thermal resistance 150°C (short duration 200°C). For application with Diesel engine vehicles, equipped with Diesel Particulate Filter – Euro 5, Euro 6, (as there high exhaust temperature can occur), we recommend extractors with hose sets of increased thermal resistance (ZW/CF).

# ALAN-N



Dimension	Spring drive	
	U/C-8-N	U/C-12-N
A	775	1000
B	1000	1225
C	355	355
D1	450	450
D2	645	645
E	780	780

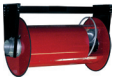
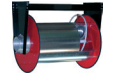
1. Framework  
 2. Hose reel  
 3. Reel cover  
 4. Spiral  
 5. Connection  
 6. Spring mechanism  
 7. Brake



Dimension	Motor drive	
	U/E-8-N	U/E-12-N
A	775	1000
B	1000	1225
C	355	355
D1	450	450
D2	645	645
E	780	780

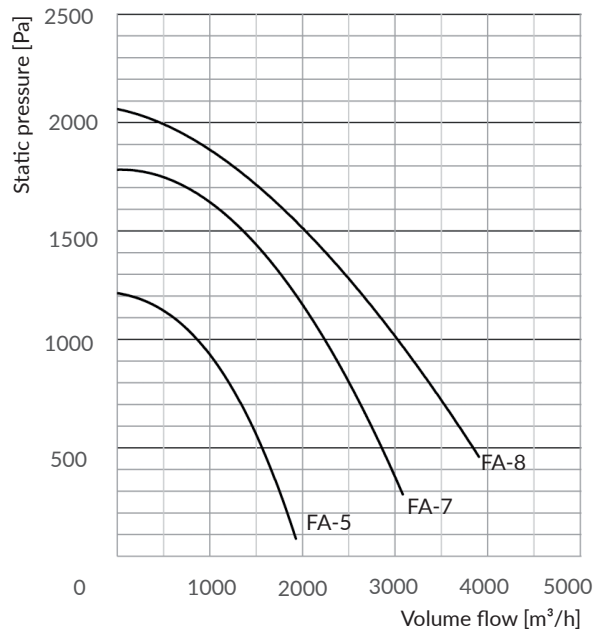
1. Framework  
 2. Hose reel  
 3. Reel cover  
 4. Spiral  
 5. Connection  
 6. Gear motor

## Technical data

	Type <sup>1</sup>	Equipped with a shut-off damper	Part no.	Maximum torque [Nm]	Maximum hose length [m]	Hose	Fan	Weight of the device <sup>2</sup> [kg]		
	ALAN-U/C-8-N	no	805070	50	8	Each reel is adapted to be equipped with a hose of diameter Ø100, Ø125 or Ø150 mm.	The fans should be selected according to the hose diameter (see Table HOSE SETS).	51		
	ALAN/P-U/C-8-N	yes	805072							
	ALAN-U/E-8-N	no	805082							
	ALAN/P-U/E-8-N	yes	805088							
	ALAN-U/C-12-N	no	805071	50	12					61
	ALAN/P-U/C-12-N	yes	805073	50						
	ALAN-U/E-12-N	no	805083	80						
	ALAN/P-U/E-12-N	yes	805089	80						


1. Prior the selection of the appropriate size of reel extractor, please contact KLIMAWENT S.A.  
 2. Values of weight are given without the hose weight.

## Flow charts



# ALAN-N


## Built-on fans (mounted directly to the reel extractor)

	Type	Part no.	Supply voltage [V]; 50 Hz	Inlet/outlet diameter [mm]	Motor rate [kW]	Acoustic pressure level [dB(A)] <sup>1</sup>	Weight [kg]
	FA-5-1	804W72	230	160/160	0,55	55	17
	FA-5-3	804W73	3x400	160/160	0,55	55	17
	FA-7-1	804W74	230	160/200	1,1	72	24
	FA-7-3	804W75	3x400	160/200	1,1	72	24
	FA-8-3	804W76	3x400	160/200	1,5	74	31

1. Noise level measured from distance of 5 m.


For other fans – flange type fans WPA-E-N or roof fans WPA-D-N – see catalogue FANS.

## Rubber stoppers

	Type	Part no.	Internal diameter [mm]
	ZO-100	804K40	100
	ZO-125	804K41	125
	ZO-150	804K42	150


Applied in spring driven reel extractors, fastened on the exhaust hose.

## Wall bracket

	Type	Part no.	Length [mm]	Weight of the set [kg]
	L860	817W33	800	12

A set – to install the reel extractor to the wall or a column.

## Hose sets

Type	Part no.	Hose diameter [mm]	Weight [kg]	Hose length [m]	Recommended volume flow [m <sup>3</sup> /h]	Flow resistance <sup>1</sup> [Pa]	Thermal resistance [°C]	Application <sup>4</sup>	Fans to operate with	
	ZW-8/100	828P64	100	5,2	8	400	1100	150 <sup>2</sup>	SO	FA-5, WPA-5-E-N, WPA-5-D-N
	ZW-8/100/CF	828P51	100	5,2	8	400	1100	300/150 <sup>3</sup>	SO	
	ZW-8/125	828P65	125	6,4	8	700	1200	150 <sup>2</sup>	SD	FA-5, WPA-5-E-N, WPA-5-D-N
	ZW-8/125/CF	828P52	125	6,4	8	700	1200	300/150 <sup>3</sup>	SD	
	ZW-8/150	828P66	150	7,6	8	1500	1500	150 <sup>2</sup>	SC	FA-7, WPA-7-E-N, WPA-7-D-N
	ZW-8/150/CF	828P53	150	7,6	8	1500	1500	300/150 <sup>3</sup>	SC	
	ZW-12/100	828P67	100	7,8	12	400	1500	150 <sup>2</sup>	SO	FA-5, WPA-5-E-N, WPA-5-D-N
	ZW-12/100/CF	828P54	100	7,8	12	400	1500	300/150 <sup>3</sup>	SO	
	ZW-12/125	828P68	125	9,5	12	700	1600	150 <sup>2</sup>	SD	FA-7, WPA-7-E-N, WPA-7-D-N
	ZW-12/125/CF	828P55	125	9,5	12	700	1600	300/150 <sup>3</sup>	SD	
	ZW-12/150	828P69	150	14,8	12	1500	2000	150 <sup>2</sup>	SC	FA-8, WPA-8-E-N, WPA-8-D-N
	ZW-12/150/CF	828P56	150	14,4	12	1500	2000	300/150 <sup>3</sup>	SC	

1. Flow resistances concern to the hose completely wound down of the reel.


2. Hose of thermal resistance 150°C (short duration 200°C).

3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section thermal resistance 150°C (short duration 200°C).

4. SO – car, SD – medium size vehicle, SC – truck.

## Control units for reel exhaust extractor type E

ZE-ALAN control unit is for installing in a garage or other room indicated by User. The unit provides switch ON/OFF of the fan through a motor protective switch and as well as operates the reel as "hose wind-UP/DOWN" by means of buttons. Depending on the motor power rate, the control unit is equipped with an appropriately selected motor protective switch. Additionally, the unit is equipped with a short-circuit and thermal protection. The motor disconnecter protects the motor when it gets blocked while starting-up, during the overload, short-circuit and during the non-complete-phase operation (three-phase motors).

Type	Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range [A]	Fans to operate with	
	ZE-ALAN-U/E-6,3-1	816Z31	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	816Z32	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	816Z33	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	816Z34	3x400	1,1 i 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

## Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.