AERECO

NEW

AWN-RV

Exhaust fan with heat recovery module
Under roof or outdoor installation

Recovery of the exhaust air energy for heating or water heating through connection to heat pump.

Low energy consumption: EC motor associated with an automatic pressure control device.

High energy performance: equivalent to A+ class (ErP).

DCV compatible: integrated automatic pressure control device, optimizing the DCV performance.

Easy to install: many available adaptation parts, possibility of custom-built construction.

Under roof or outdoor installation (special version).

Silent: acoustic foam on the entire envelope and sound trap available on request, optional.

Easy to maintain: motor easily accessible by a trapdoor to clean the blades.

Demand controlled ventilation, even more energy efficient

The AWN range enhances again the energy performance of the root Aereco demand controlled ventilation system: by adapting the airflows according to the needs in the dwelling, the Aereco DCV system already reduces consequently the heat demand. Through recovering the heat air energy at the level of the exhaust fan, the AWN drastically reduces the energy load for the air renewal. The AWN is connected to a heat pump that can be used for water heating or air heating. The AWN range offers two types of calorigen fluid: water + glycol or refrigerant.

Decreasing the energy load of the heating system

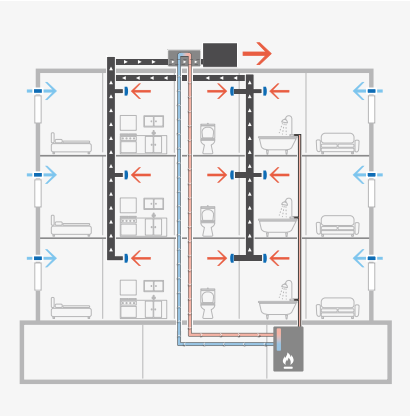
Through this system, an important part of the energy induced by the ventilation can be recovered and then be reused to decrease the energy demand of the energy generating system. In the presence of a heat pump for heat generation, this energy can be directly integrated into the heat source circuit (brine or air). In the case of other heat generators, this energy quantity can be brought from the exhaust air to a temperature level (max. 50°C) by means of an autonomous heat pump. Thus, for example, the preheating of the hot water is possible or is provided in a buffer store for the heating and / or hot water. In the case of combined use of the ventilation and heat pump technology, a heat exchanger is installed in front of the exhaust fan. The remaining usable energy is extracted from the exhaust air. Intelligent control optimizes the supply and demand of energy from exhaust air and outside air.

Pressure control device

A pressure control system is integrated in the fan, allowing to define easily the working pressure. Pressure measured by the pressure gauge is displayed on digital screen. It is automatically regulated, optimizing the system working with demand controlled exhaust units.

Easy maintenance

The AWN RV exhaust fans are equipped with a trapdoor allowing the direct access to the motor for the propeller cleaning.



COLLECTIVE MEV

AWN-RV Exhaust fan with heat recovery module

ErP A+

		AWN RV-A40 h G	AWN RV-A50 h G
Indoor installation configuration (outdoor installation version)		■ (AWN RV-A40 OD h G)	■ (AWN RV-A50 OD h G)
Standard configuration		Connection side left side (seen in air direction)	
Energetic data			
SEV class* (brine 7°C) AWN RV		A	A+
SEV class* (brine 7°C) AWN RV + constant/demand controlled exhaust air elements		A	A+
SEV class* (brine 7°C) AWN RV + demand controlled exhaust air elements		A+	A+
Corresponding estimated living space	m^2	1 360	2 080
Maximum heat extraction per year	MWh	56	95
Heat supply degree (brine 7°C/0°C)	%	78 / 115	86 / 126
Maximum heat supply of heat pump	kW	9,0	15,2
Features			
Dimensions (W x H x L)	mm	864 x 643 x 1 490	1415 x 643 x 1 630
Sound pressure level, housing radiation Lwag*** /suction side***	dB	61 / 67	60 / 57
Weight	kg	165	230
Heat exchanger air/water/glycol transfer to exchanger medium		**Ethylene glycol 35%**	**Ethylene glycol 35%**
Heat recovery	kW	4,7	9,3
Exhaust air inlet/outlet temperature	°C	20 / 11,6	20 / 10,5
Water glycol (35%) fluid	m^3/h	0,87	1,9
Water glycol inlet temperature/ outlet temperature	°C	7 / 12,2	7 / 11,1
Filter protection G4 (with filter monitoring)		■	■
Heat exchanger flow and return		Cu ¾ " thread	Cu 1" external thread
Glycol pressure sensor / glycol dyke inclusive accessories		■	■
Condensate trough inclusive accessories		■	■
Condensate tube diameter	mm	20	20
Fan motors			
Fan type		RV-A40	RV-A50
Nominal airflow @ 130 Pa***	m^3/h	1.700	2.600
EC technology		■	■
Connection facilities (exhaust air pipes)		Lateral (x2), front-end	Lateral (x2), front-end
Exhaust air pipe connector diameter (DN)	mm	355	400
SFP** @ 130 Pa*** / SFP** with 75% @ 130 Pa***	W/m^3h	0,18 / 0,14	0,13 / 0,11
Power consumption @ 75% (specification)	W	183	223
Repair switch		■	■
Connection voltage		230 V / 50 Hz	230 V / 50 Hz
Rated current @ 130 Pa***	A	1,32	1,53
Nominal power @ 130 Pa***	W	300	350
Maximum power consumption (motor start)	W	450	520
Protection type	IP	54	54
Maximum air temperature	°C	40	40
Error message		■	■
Mains connection		To repair switch, otherwise completely hardwired	
Accessories			
Smoke detectors and bypass for free outflow in the event of a fire		□	□
PLC control, interfaces to building technology		□	□

*Specific energy consumption in accordance with ERP 1254/2014, depending on device configuration

**SFP = Specific Fan Power

***Tested by Institut für Luft und Kältetechnik (ILK) Dresden.

■ standard □ optional

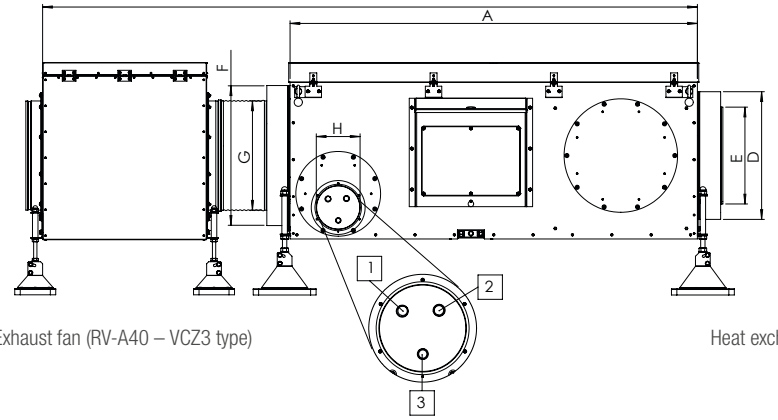
		AWN RV-A40 h R	AWN RV-A50 h R
Indoor installation configuration (outdoor installation version)		■ (AWN RV-A40 OD h R)	■ (AWN RV-A50 OD h R)
Standard configuration		Connection side left side (seen in air direction)	
Energetic data			
SEV class* (brine 7°C) AWN RV		A	A+
SEV class* (brine 7°C) AWN RV + constant/demand controlled exhaust air elements		A	A+
SEV class* (brine 7°C) AWN RV + demand controlled exhaust air elements		A+	A+
Corresponding estimated living space	m^2	1 360	2 080
Maximum heat extraction per year	MWh	56	95
Heat supply degree (brine 7°C/0°C)	%	78 / 115	86 / 126
Maximum heat supply of heat pump (Remark: data depends on heat pump on site)	kW	9,0	15,2
Features			
Dimensions (W x H x L)	mm	864 x 643 x 1 490	1415 x 643 x 1 630
Sound pressure level, housing radiation Lwag*** /suction side***	dB	61 / 67	60 / 57
Weight	kg	164	229
Refrigerant type (other types available on demand)		**R 410 a -- R134 a**	**R 410 a -- R134 a**
Heat recovery	kW	7,38 -- 7,08	12,1 -- 11,59
Exhaust air inlet/outlet temperature	°C	20 / 8,65 -- 20 / 8,98	20 / 8,12 -- 20 / 8,34
Refrigerant (35%) fluid	m^3/h	6 -- 11	9 / 17
Vaporizing temp/ condensation temp	°C	5 / 48 -- 5 / 48	5 / 48 -- 5 / 48
Filter protection G4 (with filter monitoring)		■	■
Heat exchanger flow and return		Soldering nozzles	Soldering nozzles
Glycol pressure sensor / glycol dyke inclusive accessories		■	■
Condensate trough inclusive accessories		■	■
Condensate tube diameter	mm	DN 20	DN 20
Fan motors			
Fan type		RV-A40	RV-A50
Nominal airflow @ 130 Pa***	m^3/h	1 700	2 600
EC technology		■	■
Connection facilities (exhaust air pipes)		Lateral (x2), front-end	Lateral (x2), front-end
Exhaust air pipe connector diameter (DN)	mm	DN 355	DN 400
SFP** @ 130 Pa*** / SFP** with 75% @ 130 Pa***	W/m^3h	0,18 / 0,14	0,13 / 0,11
Power consumption at 75% (specification)	W	183	223
Repair switch		■	■
Connection voltage		230 V / 50 Hz	230 V / 50 Hz
Rated current @ 130 Pa***	A	1,32	1,53
Nominal power @ 130 Pa***	W	300	350
Maximum power consumption (motor start)	W	450	520
Protection type	IP	54	54
Maximum air temperature	°C	40	40
Error message		■	■
Mains connection		To repair switch, otherwise completely hardwired	
Accessories			
Smoke detectors and bypass for free outflow in the event of a fire		□	□
PLC control, interfaces to building technology		□	□

*Specific energy consumption in accordance with ERP 1254/2014, depending on device configuration

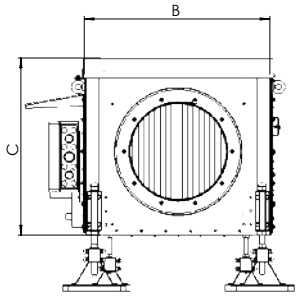
**SFP = Specific Fan Power

***Tested by Institut für Luft und Kältetechnik (ILK) Dresden.

■ standard □ optional

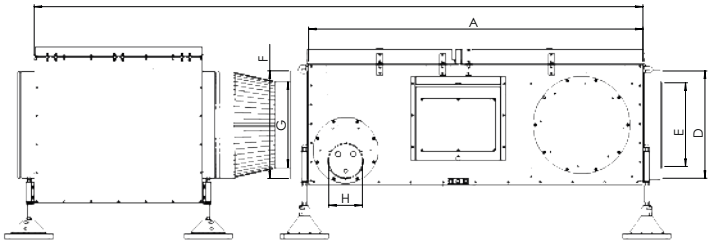


Exhaust fan (RV-A40 – VCZ3 type)

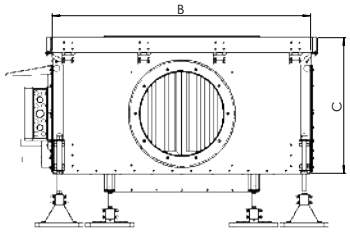


Heat exchanger

AWN RV-A40 (OD) h



Exhaust fan (RV-A50 – VCZ4 type)



Heat exchanger

AWN RV-A50 (OD) h

Remark: the exhaust fan is included in the AWN. See the datasheet of the fan for its dimensions.

	Overall size	AWN RV-A40 (OD) h	AWN RV-A50 (OD) h
A	Length [mm]	1 490	1 630
B	Width [mm] / + control unit	695 / 864	1 245 / 1 415
C	Height [mm]	643	643
D	Insulated connection of air channeling connection pipe socket	DN 467	DN 512
E	Connection spigot	DN 355	DN 400
F	Insulated connection of fan connection spigot	DN 512	DN 612
G	Fan connection spigot	DN 400	Special type DN 500
H	Insulated connection of tube bundle	DN 160	DN 160
1	Heat exchanger – return flow	Copper tube 3/4 “	Copper tube 1”
2	Heat exchanger flow	Copper pipe 3/4 “	Copper pipe 1”
3	Condensate drainage	DN 20 plastics	DN 20 plastics

AERECO

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