



AWN CONNECT - VENTILATION SYSTEM

EXHAUST AIR SYSTEM WITH HEAT RECOVERY AND HEAT GENERATION



AWN CONNECT

CENTRAL VENTILATION UNIT WITH INTEGRATED EXHAUST AIR HEAT PUMP

Separate fan unit and heat pump for greater flexibility

Exhaust air heat pump efficient for heat generation and heat recovery

The AWN Connect includes the AWN Basic (DV / RV), and a separate heat pump specifically designed for AWN: Connect WP. In combination with an air extraction module (AWN Basic) for outdoor or indoor installation, the AWN Connect system can be flexibly adapted to individual building projects. In addition, several AWN Basic can be used with a unique Connect WP.

Intelligent and Source-Oriented Heat Pump Control - ReSource Control

The source-oriented heat pump control - ReSource Control - always adjusts the heat pump flow according to the volume flow of exhaust air available. This resulted in near-continuous operation and extended operating time for improved homogeneity and efficiency.

Highly efficient feed pumps

Into the Connect WP, a highly efficient and power-controlled heating water feed pump is already integrated. In order to guarantee a constant temperature distribution between the outgoing flow and the return of the heat pump and thus to obtain the best performances, the supply pump is always adapted to the requirements thanks to an integrated measuring technology.

In the Connect WP, a pump for the distribution of brine and a pump for the distribution of heating water are already integrated.

Ventilation units with exhaust air heat exchanger and heat pump



2 models
DV: Outdoor installation
RV: Indoor installation



Low energy consumption: EC motor combined with automatic pressure control.



DCV compatible: built-in automatic pressure control device to optimize the performance of modulated ventilation.



ReSource Control – Smart, Heat pump control Source-oriented.



Continuously high-performance figures for the highest efficiency.

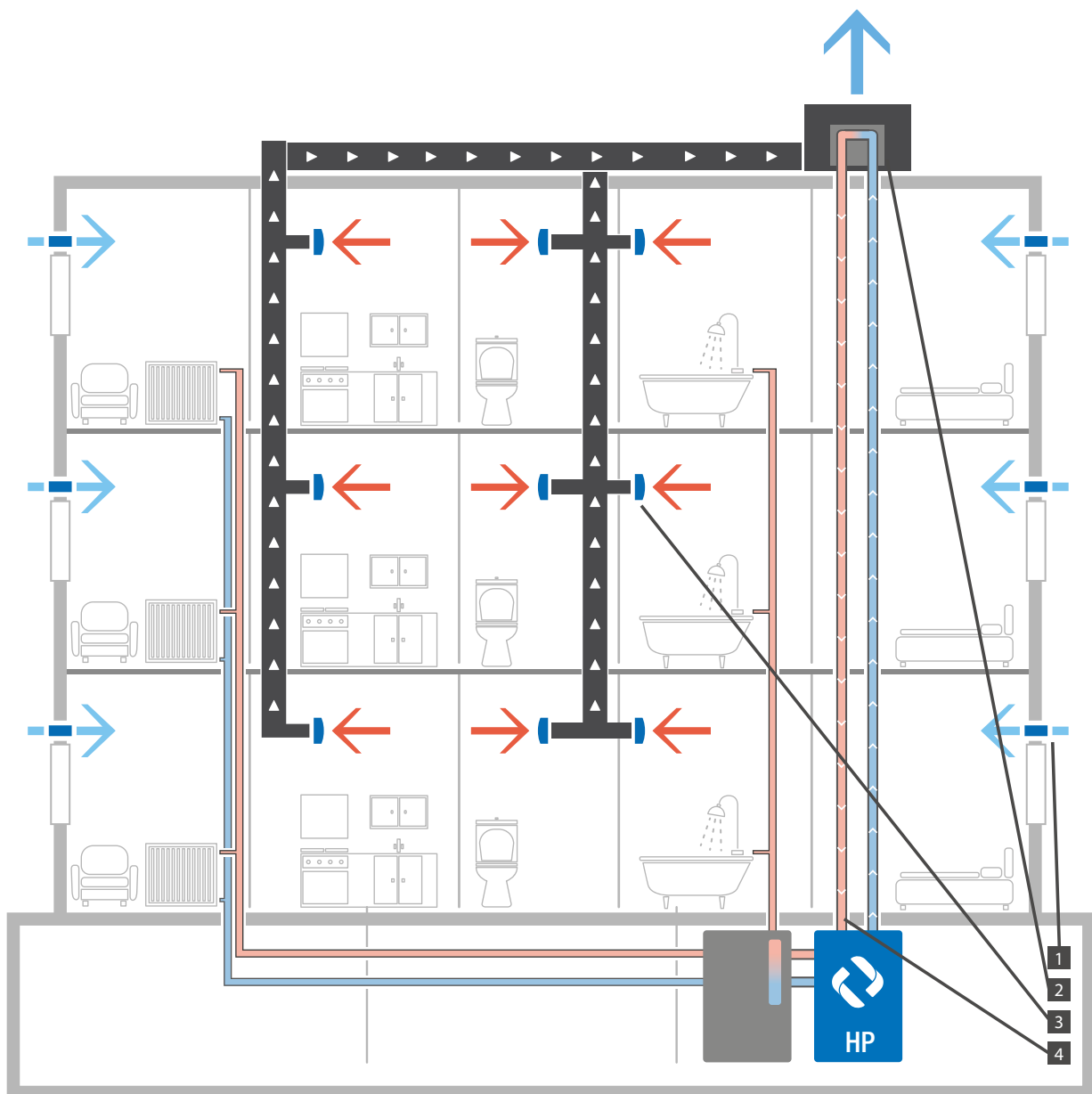


Easy to maintain: motor easily accessible by a trapdoor.



Easy to install: several adaptation parts available, possibility of custom configuration.

HOW IT WORKS ?



1. Humidity-controlled external air ducts
2. Heat Exchanger + EC fan
3. Exhaust unit
4. Brine pipeline leads to Aereco heat pump

Preventive fire protection elements must be installed and not shown in this schematic diagram !

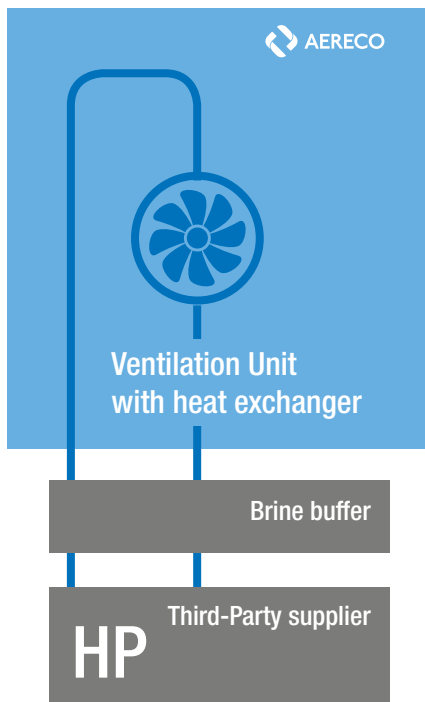
PRODUCT PORTFOLIO: FAN WITH HEAT RECOVERY

Aereco has extended its range of products in the category of „air extraction system with heat recovery“. There are three possible models for the AWN range:

AWN Basic

An air extraction module with heat exchanger without heat pump

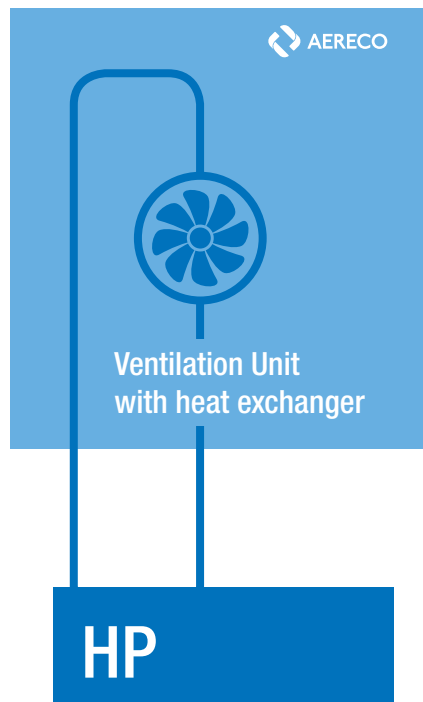
For this model (formerly called AWN-RV and AWN-DV), the AWN can be connected to an external heat pump by means of brine buffer.



AWN Connect

An air extraction module with heat exchanger and a heat pump.

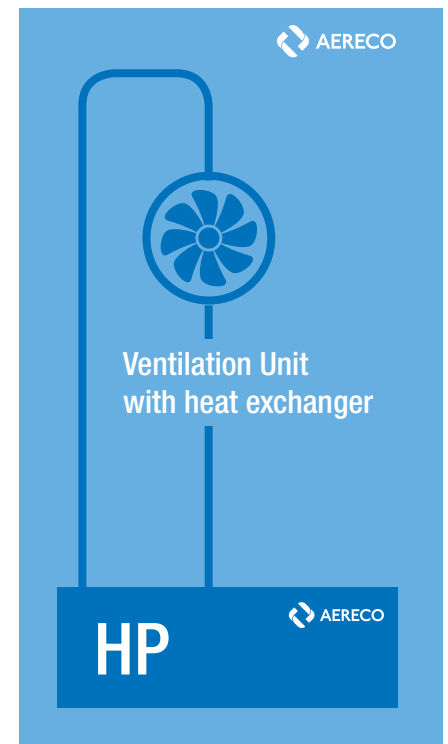
This model includes a heat pump specially designed to be used with an exhaust fan. The system is more flexible and adapts to constraints encountered in a building project: the air extraction module and the heat pump can be installed separately.



AWN Eco+

An air extraction module with heat exchanger and an integrated heat pump

This model guarantees the highest energy efficiency: Integral monobloc design allows better optimization.



FEATURES

AWN Basic

- Designed for indoor and outdoor use: The air extraction module and its heat exchanger are available in RV or DV versions
- Flexible combination: several AWN Basic can be combined with a Connect heat pump
- Can be combined with existing brine / water heat pumps via brine buffer

AWN Connect

- Flexible installation: ventilation unit with heat exchanger and heat pump can be installed separately
- Designed for indoor and outdoor use: The air extraction unit and its heat exchanger are available in RV or DV versions
- **ReSource Control: intelligent control adapts the operation of the heat pump to the fluctuations of the heat source**
- Easy installation: direct connection of the devices via a brine pipe (pressure equalization tank integrated into the brine circuit)

AWN Eco+

- Compact design: ventilation unit, heat exchanger and heat pump
- Maximum energy efficiency thanks to heat losses reduction: the heat of the extracted air is transferred directly to the refrigerant (direct evaporator)
- **ReSource Control: intelligent control adapts the operation of the heat pump to the heat source variations**
- Easy installation: Direct connection to the water heating system



AWN DV-A40 BASIC 101

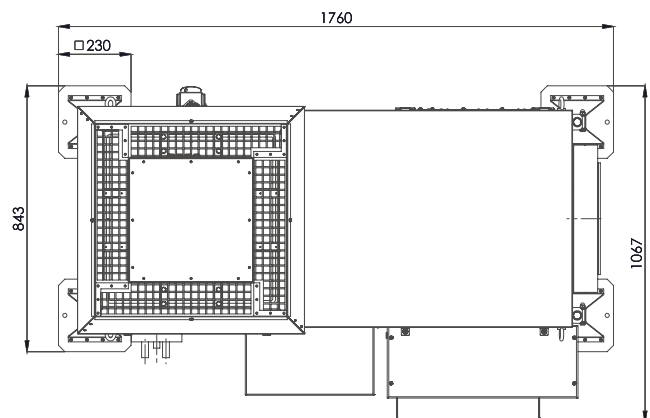
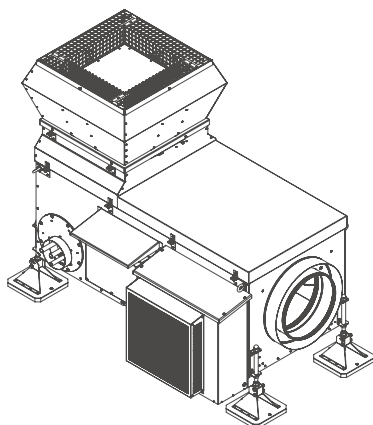
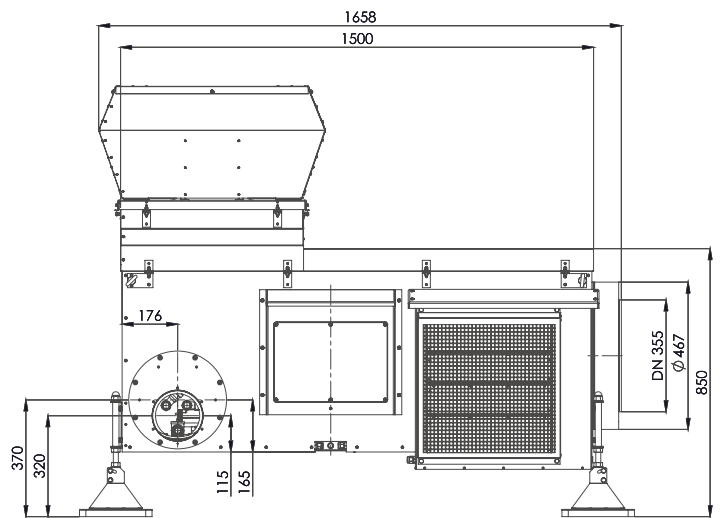
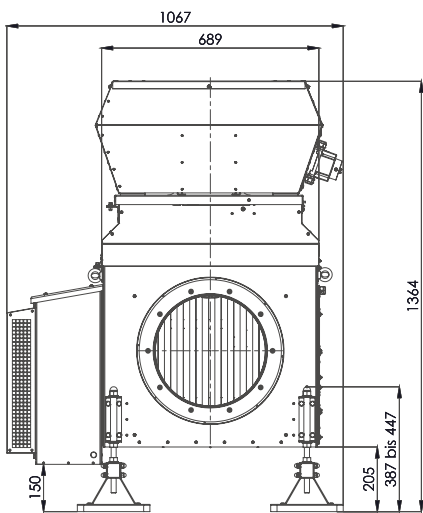
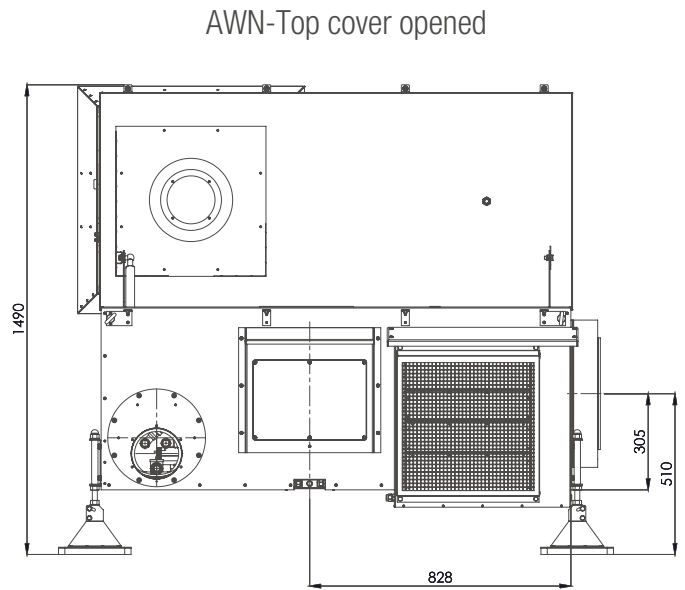
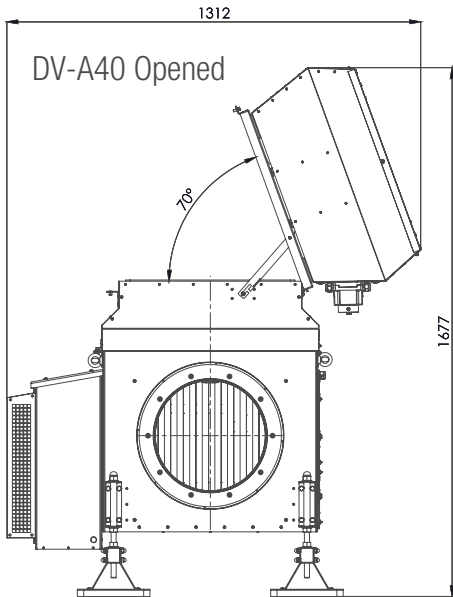
Exhaust air heat recovery module (ventilation unit and heat exchanger)

		AWN DV-A40 Basic 101
Set up		Outdoor
Energetic data		
Corresponding estimated living space for exchange rate 0.5 1/h, 2.5m ceiling	m ²	1.760
Max. Heat extraction per year at brine inlet temperature 0 ° C, Brine flow 1 m ³ / h, air flow 1833 m ³ / h	MWh	64
Heat recovery rate (brine inlet temperature 7 ° C / 0 ° C) according to DIN EN 13141-7	%	66 / 97
Features		
Max. dimensions (B x H x L)	mm	1.067 x 1.362 x 1.754
Sound power level Housing radiation L _{WA} * at 100 / 75 / 50% nominal air flow rate	dB(A)	72 / 63 / 57
Sound power level suction side L _{WA} * at 100 / 75 / 50% nominal air volume flow	dB(A)	55 / 52 / 49
Sound pressure level L _{pA} , 3 m away from the device * at 100 / 75 / 50% nominal air volume flow	dB(A)	54 / 45 / 40
Weight	kg	173
Exhaust air - connection options		1x frontally or 1x laterally, 1x at the front and 1x laterally or 2x laterally, Standard: 1x exhaust air at the front, 1x bypass set at the side
Exhaust air - connection diameter	mm	355
Relay output for fault message		included
Smoke detector & bypass for free outflow in case of fire		included
Heat exchanger air / brine		
Output of the heat exchanger at 83% nominal air volume flow at brine inlet temperature 4 ° C, 83% as an annual average volume flow	kW	6,0
Recommended brine flow rate	m ³ /h	1
Filter class		G4 (Including filter monitoring)
Connection brine line (flow and return)	mm	Cu ø 22, connection left or right possible
Leakage sensor brine line + drip tray		included
Connection condensate drain	mm	20
Ventilation unit with EC technology		
Ventilation device type		DV-A40
Nominal airflow volume @ 130 Pa*	m³/h	2.200
SFP (volume flow-related ventilation unit power) * at 100% / 75% rated air flow rate	W/(m ³ /h)	0,149 / 0,107
Power consumption * at 75% nominal air volume flow	W	177
Max current rated	A	2,0
Power rating at nominal airflow	W	328
Max power consumption (motor startup)	W	465
Index protection	IP	54
Maximum exhaust air temperature allowed	°C	40

All data for exhaust air of 20 °C and 50% rel. humidity

*measurements from the institute of air handling and refrigeration (ILK) Dresden

Dimensions in mm





AWN DV-A50 BASIC 101

Exhaust air heat recovery module (ventilation unit and heat exchanger)

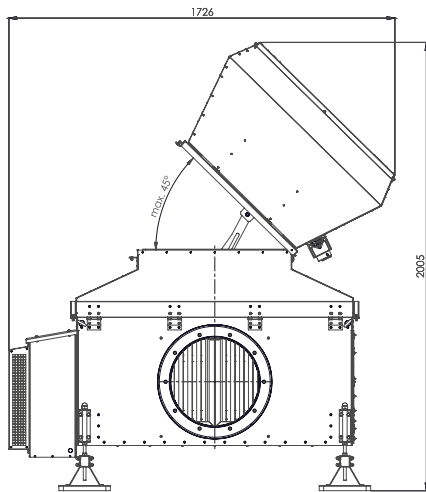
		AWN DV-A50 Basic 101
Set up		Outdoor
Energetic data		
Corresponding estimated living space for exchange rate 0.5 1/h, 2.5m ceiling	m ²	2.640
Max. Heat extraction per year at brine inlet temperature 0 ° C, Brine flow 1 m ³ / h, air flow 1833 m ³ / h	MWh	138
Heat recovery rate (brine inlet temperature 7 ° C / 0 ° C) according to DIN EN 13141-7	%	84 / 125
Features		
Max. dimensions (B x H x L)	mm	1.618 x 1.627 x 1.854
Sound power level Housing radiation L _{WA} * at 100 / 75 / 50% nominal air flow rate	dB(A)	69 / 65 / 58
Sound power level suction side L _{WA} * at 100 / 75 / 50% nominal air volume flow	dB(A)	62 / 56 / 52
Sound pressure level L _{pA} , 3 m away from the device * at 100 / 75 / 50% nominal air volume flow	dB(A)	52 / 47 / 41
Weight	kg	205
Exhaust air - connection options		1x frontally or 1x laterally, 1x frontally und 1x laterally or 2x laterally, Standard: 1x exhaust air at the front, 1x Bypass-Set laterally
Exhaust air - connection diameter	mm	400
Relay output for fault message		included
Smoke detector & bypass for free outflow in case of fire		included
Heat exchanger air / brine		
Output of the heat exchanger at 83% nominal air volume flow at brine inlet temperature 4 ° C, 83% as an annual average volume flow	kW	12,2
Recommended brine flow rate	m ³ /h	2,4
Filter class		G4 (Including filter monitoring)
Connection brine line (flow and return)	mm	Cu ø 28, connection left or right possible
Leakage sensor brine line + drip tray		included
Connection condensate drain	mm	20
Ventilation unit with EC technology		
Ventilation device type		DV-A50
Nominal airflow volume @ 130 Pa*	m³/h	3.300
SFP (volume flow-related ventilation unit power) * at 100% / 75% rated air flow rate	W/(m ³ /h)	0,114 / 0,091
Power consumption * at 75% nominal air volume flow	W	226
Max current rated	A	2,4
Power rating at nominal airflow	W	377
Max power consumption (motor startup)	W	530
Index protection	IP	54
Maximum exhaust air temperature allowed	°C	40

All data for exhaust air of 20 °C and 50% rel. humidity

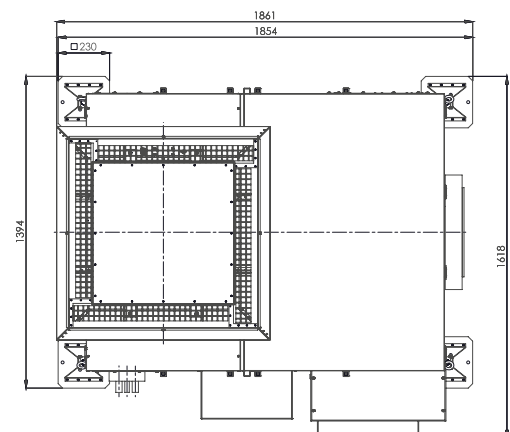
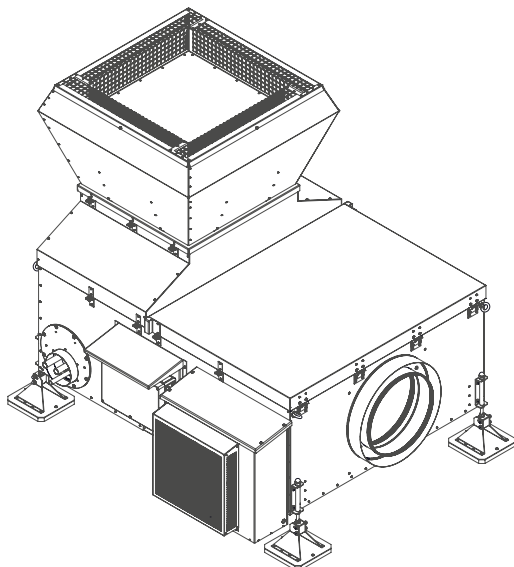
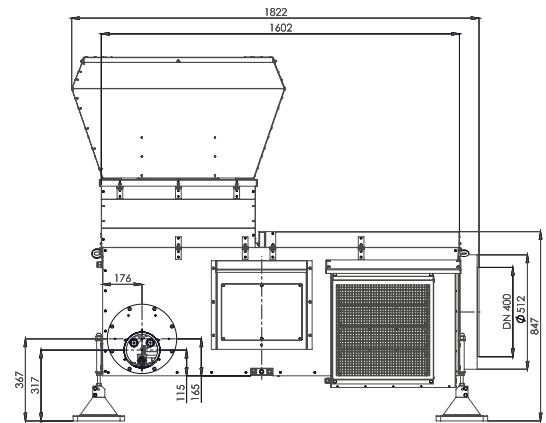
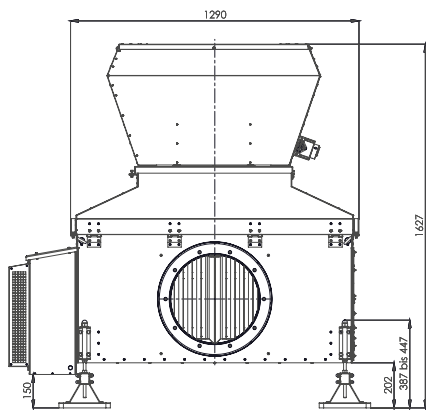
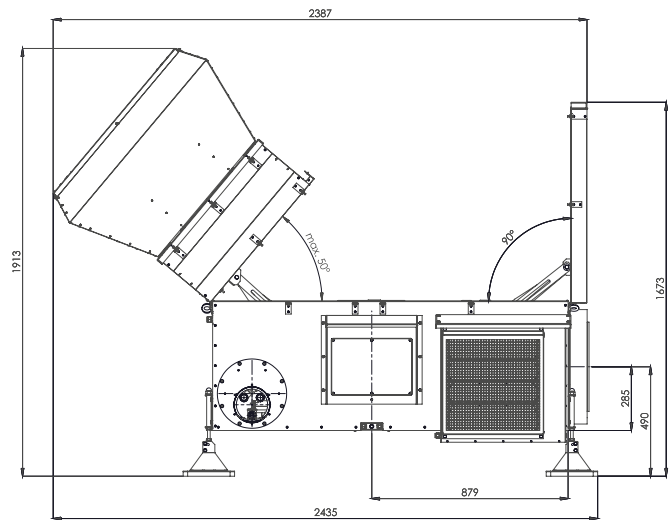
*measurements from the institute of air handling and refrigeration (ILK) Dresden

Dimensions in mm

DV-A50 Opened



AWN-Top cover opened





AWN DV-A70 BASIC 101

Exhaust air heat recovery module (ventilation unit and heat exchanger)

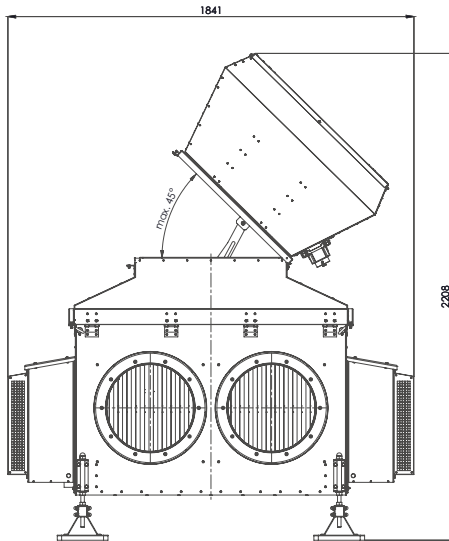
		AWN DV-A70 Basic 101
Set up		Outdoor
Energetic data		
Corresponding estimated living space for exchange rate 0.5 1/h, 2.5m ceiling	m ²	3.840
Max. Heat extraction per year at brine inlet temperature 0 ° C, Brine flow 1 m ³ / h, air flow 1833 m ³ / h	MWh	173
Heat recovery rate (brine inlet temperature 7 ° C / 0 ° C) according to DIN EN 13141-7	%	78 / 114
Features		
Max. dimensions (B x H x L)	mm	1.841 x 1.827 x 1.854
Sound power level Housing radiation L _{WA} * at 100 / 75 / 50% nominal air flow rate	dB(A)	71 / 66 / 60
Sound power level suction side L _{WA} * at 100 / 75 / 50% nominal air volume flow	dB(A)	65 / 61 / 56
Sound pressure level L _{pA} , 3 m away from the device * at 100 / 75 / 50% nominal air volume flow	dB(A)	54 / 48 / 43
Weight	kg	364
Exhaust air - connection options		2x frontally or 1x frontally und 1x laterally, Standard: 2x exhaust air at the front, 2x Bypass-Set laterally
Exhaust air - connection diameter	mm	400
Relay output for fault message		included
Smoke detector & bypass for free outflow in case of fire		included
Heat exchanger air / brine		
Output of the heat exchanger at 83% nominal air volume flow at brine inlet temperature 4 ° C, 83% as an annual average volume flow	kW	16,2
Recommended brine flow rate	m ³ /h	2,8
Filter class		G4 (Including filter monitoring)
Connection brine line (flow and return)	mm	Cu ø 28, connection left or right possible
Leakage sensor brine line + drip tray		included
Connection condensate drain	mm	20
Ventilation unit with EC technology		
Ventilation device type		DV-A70
Nominal airflow volume @ 130 Pa*	m³/h	4.800
SFP (volume flow-related ventilation unit power) * at 100% / 75% rated air flow rate	W/(m ³ /h)	0,124 / 0,099
Power consumption * at 75% nominal air volume flow	W	355
Max current rated	A	3,3
Power rating at nominal airflow	W	597
Max power consumption (motor startup)	W	740
Index protection	IP	54
Maximum exhaust air temperature allowed	°C	40

All data for exhaust air of 20 °C and 50% rel. humidity

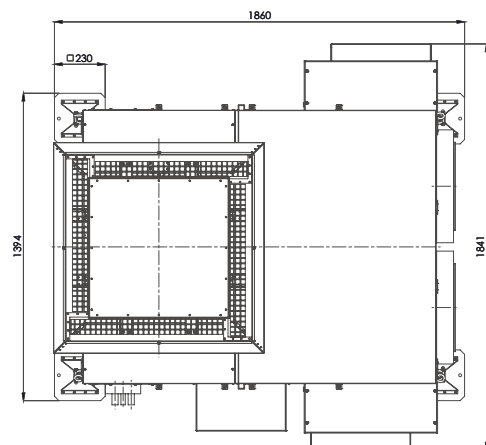
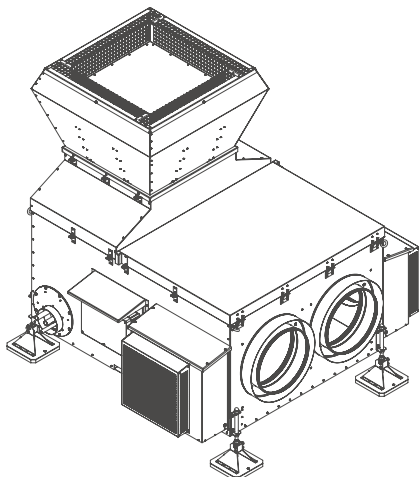
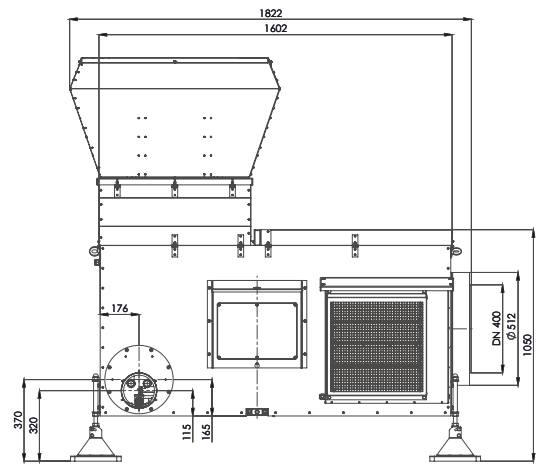
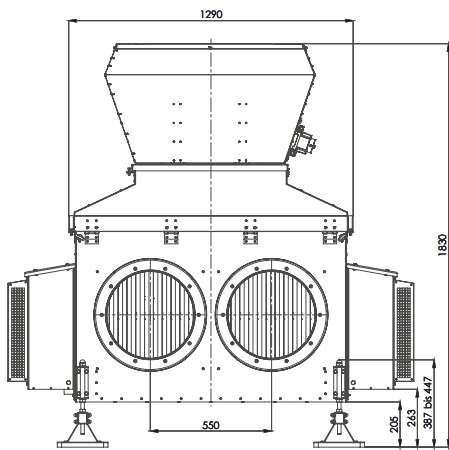
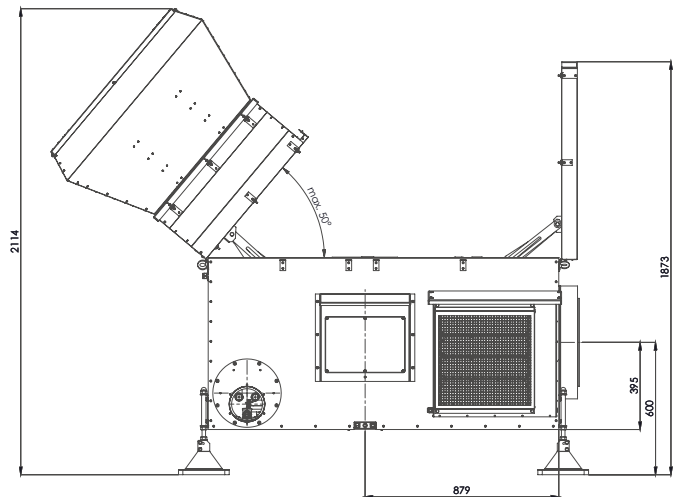
*measurements from the institute of air handling and refrigeration (ILK) Dresden

Dimensions in mm

DV-A70 Opened



AWN-Top cover opened





AWN RV-A40 BASIC 100 / 101

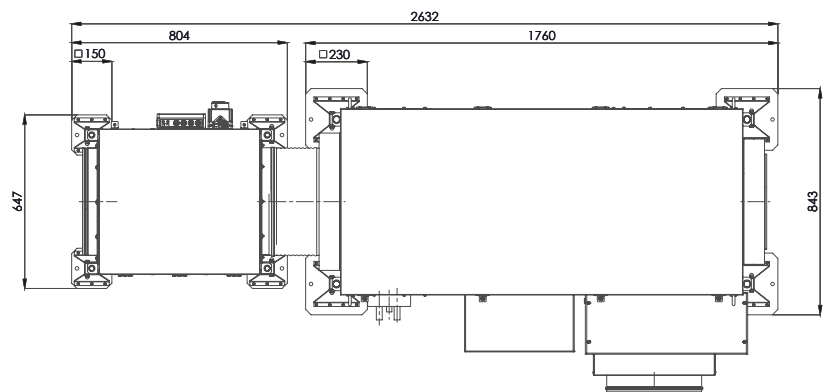
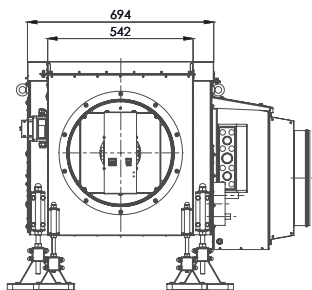
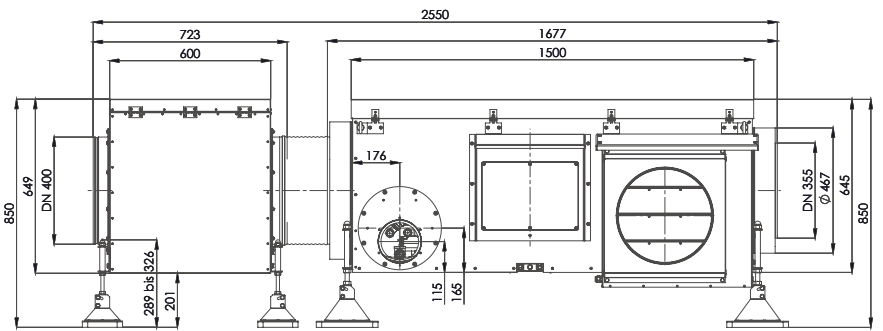
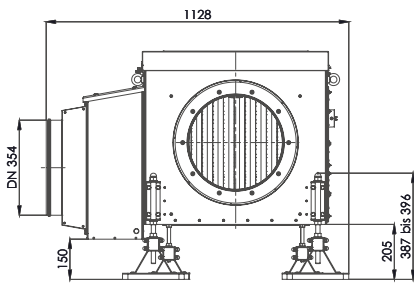
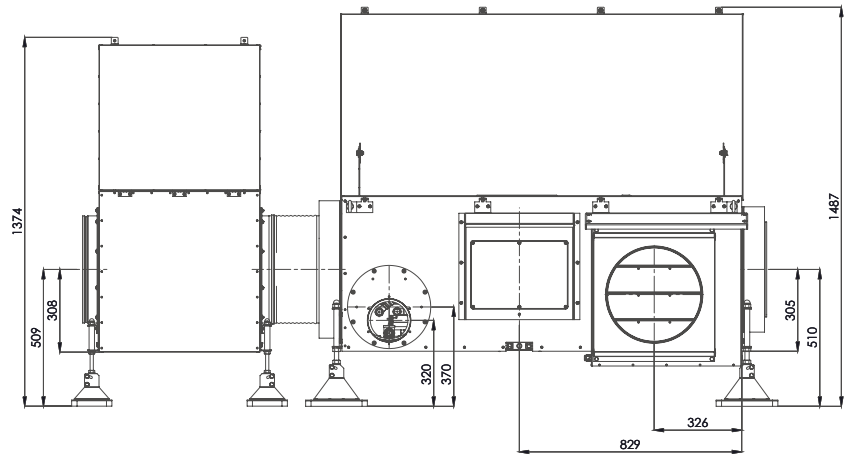
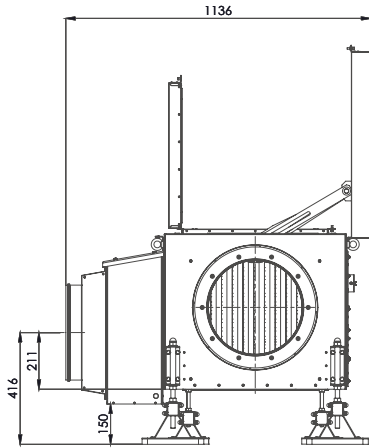
Exhaust air heat recovery module (ventilation unit and heat exchanger)

	AWN RV-A40 Basic 100 / 101	
Set up		100 - Indoor 101 - Outdoor
Energetic data		
Corresponding estimated living space for exchange rate 0.5 1/h, 2.5m ceiling	m ²	1.360
Max. Heat extraction per year at brine inlet temperature 0 ° C, Brine flow 1 m ³ / h, air flow 1833 m ³ / h	MWh	58
Heat recovery rate (brine inlet temperature 7 ° C / 0 ° C) according to DIN EN 13141-7	%	74 / 110
Features		
Max. dimensions (B x H x L)	mm	1.035 x 847 x 2.629
Sound power level Housing radiation L _{WA} * at 100 / 75 / 50% nominal air flow rate	dB(A)	61 / 59 / 59
Sound pressure level L _{pA} , 3m away from the device * at 100 / 75 / 50% nominal air volume flow	dB(A)	71 / 61 / 63
Sound pressure level side L _{WA} * bei 100 / 75 / 50 % nominal air volume flow		67 / 63 / 60
Sound pressure level L _{pA} , 3 m away from the device * at 100 / 75 / 50% nominal air volume flow	dB(A)	44 / 42 / 41
Weight	kg	195
Exhaust air - connection options		1x frontally or 1x laterally, 1x frontally und 1x laterally or 2x laterally Standard: 1x exhaust air at the front, 1x Bypass-Set laterally
Exhaust air - connection diameter	mm	355
Exhaust air - connection diameter (DN)	mm	400
Relay output for fault message		included
Smoke detector & bypass for free outflow in case of fire		included
Bypass connection diameter (DN) for indoor installation (100)	mm	355 - to be led over the roof by the customer
Heat exchanger air / brine		
Output of the heat exchanger at 83% nominal air volume flow at brine inlet temperature 4 ° C, 83% as an annual average volume flow	kW	5,5
Recommended brine flow rate	m ³ /h	1
Filter class		G4 (Including filter monitoring)
Connection brine line (flow and return)	mm	Cu ø 22, connection left or right possible
Leakage sensor brine line + drip tray		included
Connection condensate drain	mm	20
Ventilation unit with EC technology		
Ventilation device type		RV-A40
Nominal airflow volume @ 130 Pa*	m³/h	1.700
SFP (volume flow-related ventilation unit power) * at 100% / 75% rated air flow rate	W/(m ³ /h)	0,141 / 0,118
Power consumption * at 75% nominal air volume flow	W	151
Max current rated	A	2,0
Power rating at nominal airflow	W	240
Max power consumption (motor startup)	W	450
Index protection	IP	54
Maximum exhaust air temperature allowed	°C	40

All data for exhaust air of 20 °C and 50% rel. humidity

*measurements from the institute of air handling and refrigeration (ILK) Dresden

Dimensions in mm





AWN RV-A50 BASIC 100 / 101

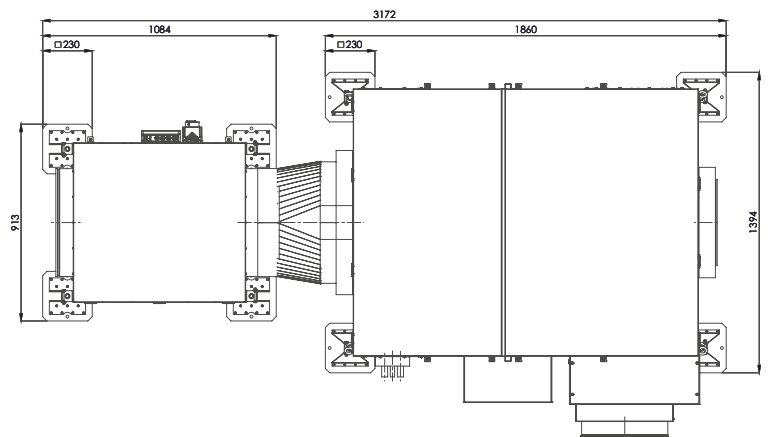
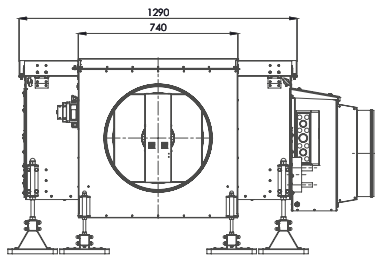
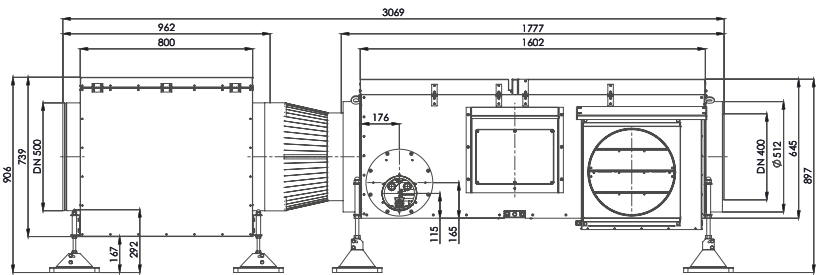
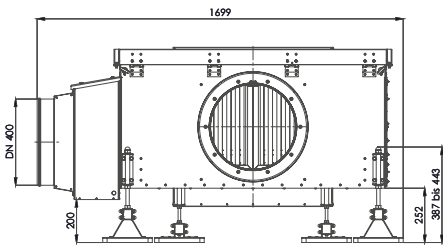
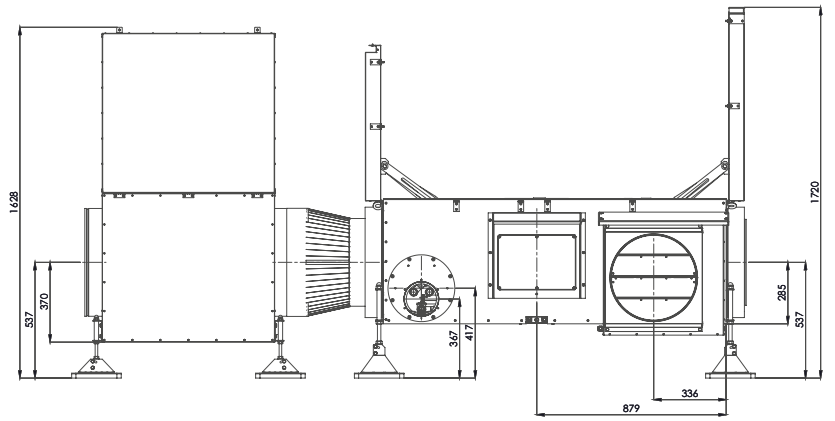
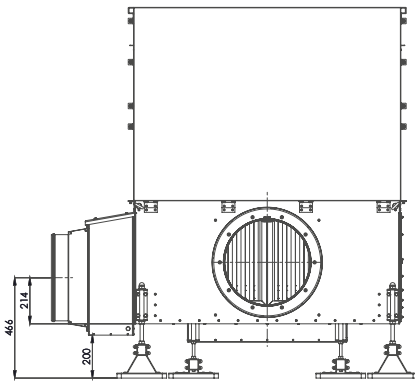
Exhaust air heat recovery module (ventilation unit and heat exchanger)

	AWN RV-A50 Basic 100 / 101	
	100 - Indoor	101 - Outdoor
Set up		
Energetic data		
Corresponding estimated living space for exchange rate 0.5 1/h, 2.5m ceiling	m ²	2.080
Max. Heat extraction per year at brine inlet temperature 0 ° C, Brine flow 1 m ³ / h, air flow 1833 m ³ / h	MWh	120
Heat recovery rate (brine inlet temperature 7 ° C / 0 ° C) according to DIN EN 13141-7	%	86 / 133
Features		
Max. dimensions (B x H x L)	mm	1.606 x 906 x 3.169
Sound power level Housing radiation L _{WA} * at 100 / 75 / 50% nominal air flow rate	dB(A)	60 / 54 / 46
Sound pressure level L _{pA} , 3m away from the device * at 100 / 75 / 50% nominal air volume flow	dB(A)	57 / 53 / 49
Sound pressure level side L _{WA} * bei 100 / 75 / 50 % nominal air volume flow		73 / 66 / 59
Sound pressure level L _{pA} , 3 m away from the device * at 100 / 75 / 50% nominal air volume flow	dB(A)	42 / 36 / 28
Weight	kg	260
Exhaust air - connection options		1x frontally or 1x laterally, 1x frontally und 1x laterally or 2x laterally Standard: 1x exhaust air at the front 1x Bypass-Set laterally
Exhaust air - connection diameter (DN)	mm	400
Exhaust air - connection diameter (DN)	mm	500
Relay output for fault message		included
Smoke detector & bypass for free outflow in case of fire		included
Bypass-Anschlussdurchmesser (DN) bei Indooraufstellung (100)	mm	400 - to be led over the roof by the customer
Heat exchanger air / brine		
Output of the heat exchanger at 83% nominal air volume flow at brine inlet temperature 4 ° C, 83% as an annual average volume flow	kW	10,7
Recommended brine flow rate	m ³ /h	2,4
Filter class		G4 (Including filter monitoring)
Connection brine line (flow and return)	mm	Cu ø 28, connection left or right possible
Leakage sensor brine line + drip tray		included
Connection condensate drain	mm	20
Ventilation unit with EC technology		
Ventilation device type		RV-A50
Nominal airflow volume @ 130 Pa*	m³/h	2.600
SFP (volume flow-related ventilation unit power) * at 100% / 75% rated air flow rate	W/(m ³ /h)	0,140 / 0,115
Power consumption * at 75% nominal air volume flow	W	225
Max current rated	A	2,3
Power rating at nominal airflow	W	365
Max power consumption (motor startup)	W	520
Index protection	IP	54
Maximum exhaust air temperature allowed	°C	40

All data for exhaust air of 20 °C and 50% rel. humidity

*measurements from the institute of air handling and refrigeration (ILK) Dresden

Dimensions in mm





AWN CONNECT

Source controlled heat pump

		Connect WP120	Connect WP130
Set up		Indoor	Indoor
Minimum volume exhaust air (effective)	m ³ /h	480	1.250
Energetic data			
Nominal Output / COP (A20/W35)*	kW / -	6,0 / 5,66	13,6 / 5,33
Nominale Output / COP (A20/W28)*	kW / -	5,8 / 7,35	13,7 / 7,18
COP (A20/W40)*		4,6	4,5
Modulation range heat output (A20/W35)	kW	2,6 - 8,6	6,8 - 22,6
Minimum volume of exhaust air	m ³ /h	480 - 1.800	1.250 - 4.500
Features			
Max. dimensions (B x H x T)	mm	605 x 603 x 976	605 x 773 x 1.126
Weight	kg	95	140
Sound pressure level, housing radiation L _{WA}	dB(A)	54	58
Sound pressure level at in 3m distance - L _{DA}	dB(A)	31	33
Contact for release by AWN		included	included
Contact for enable signal		included	included
Electrical data			
Max. current consumption	A	10,2	10,4
Supply voltage	V / Hz	230 / 50	400 / 50
Max. power consumption	kW	2,25	6,2
Brine circuit			
Feed pump		included	included
Brine circuit - water volume flow	l/h	1.340	2.760
Brine circuit - available ext. delivery pressure	kPa	52	48
Ethylene glycol		35%	35%
Brine circuit - water connections		1 1/4" IG	1 1/4" IG
Surge tank		included	included
Cooling circuit			
Refrigerant		R410A	R410A
Refrigerant charge	kg	1,6	2,39
Heating circuit			
Speed-controlled feed pump		included	included
Max. Water volume flow	l/h	1.805	3.155
Water - available delivery pressure	kPa	48	42
Water - connections heating circuit		1 1/4" IG	1 1/4" IG
Max. heating flow	°C	55	55

All data for exhaust air of 20 °C and 50% rel. humidity

*measurements from the institute of air handling and refrigeration (ILK) Dresden
Angaben gemäß EN 14511:2013

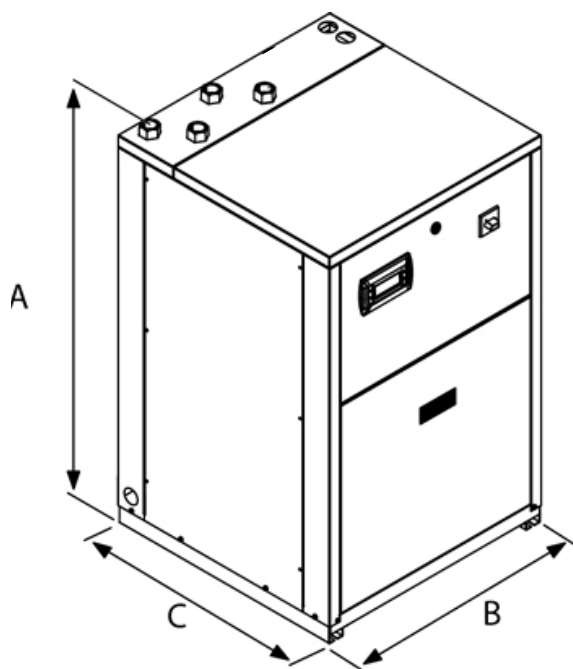


AWN CONNECT

Combination heat pump / ventilation unit

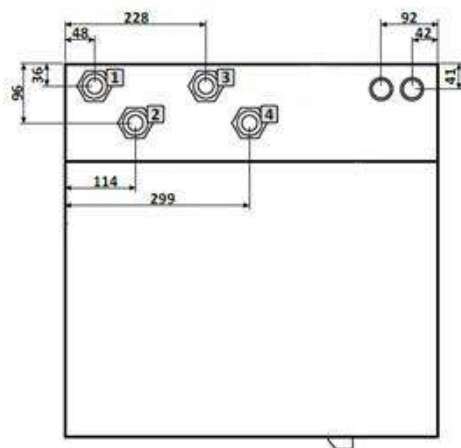
	Ventilation unit installation	Air flow range (effective volume flow)	Ventilator model	Heat pump model
AWN DV-A40 Connect 121	Outdoor	480-1.650 m ³ /h	AWN DV-A40 Basic 101	Connect WP120
AWN DV-A50 Connect 121	Outdoor	480-2.475 m ³ /h	AWN DV-A50 Basic 101	Connect WP120
AWN DV-A50 Connect 131	Outdoor	1.250-2.475 m ³ /h	AWN DV-A50 Basic 101	Connect WP130
AWN DV-A70 Connect 131	Outdoor	1.250-3.600 m ³ /h	AWN DV-A70 Basic 101	Connect WP130
AWN RV-A40 Connect 120	Indoor	480-1.275 m ³ /h	AWN RV-A40 Basic 100	Connect WP120
AWN RV-A40 Connect 121	Outdoor	480-1.275 m ³ /h	AWN RV-A40 Basic 101	Connect WP120
AWN RV-A50 Connect 120	Indoor	480-1.950 m ³ /h	AWN RV-A50 Basic 100	Connect WP120
AWN RV-A50 Connect 121	Outdoor	480-1.950 m ³ /h	AWN RV-A50 Basic 101	Connect WP120
AWN RV-A50 Connect 130	Indoor	1.250-1.950 m ³ /h	AWN RV-A50 Basic 100	Connect WP130
AWN RV-A50 Connect 131	Outdoor	1.250-1.950 m ³ /h	AWN RV-A50 Basic 101	Connect WP130

All data for exhaust air of 20° C and 50% relative humidity.

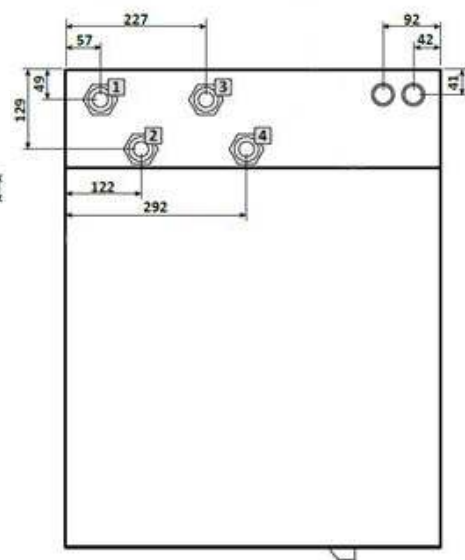


Dimensions

		Connect WP120	Connect WP130
Height (A)	mm	976	1.126
Width (B)	mm	605	605
Depth (C)	mm	603	773
Weight	kg	95	140



WP120



WP130



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