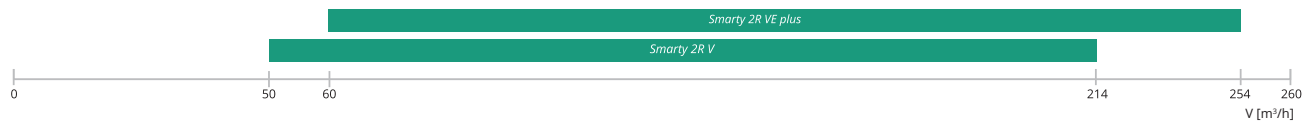


# SMARTY R



**Application** Apartments, private houses, villas and other heated premises.

**Description** Smarty RV is a heat recovery unit with a high-efficiency rotary heat exchanger designed for placement in tight spaces: kitchen cabinets, boiler rooms, etc. The unit is characteristic of high overall energy savings due to the highly efficient heat recovery (up to 77%), silent and eco-nomical EC fans, and effective low-pressure-drop filters. Several versions of cooker hoods are available as an accessory for the kitchen extraction. An integrated electrical heater helps maintaining comfortable air temperature on the premises. Smarty RV is fully equipped with demand-control ready control board. CO<sub>2</sub> or RH, and presence sensors can be connected for automatic climate control. Rotor fault indicators are included in every AHU. The supplied units have been tested and prepared for installation.

- Features**
- › Designed for placement in a space fit for a kitchen cabinet;
  - › Cooker hood connection;
  - › EC fans and rotary heat exchanger;
  - › Easy maintenance: most of the components can be removed without using tools;
  - › 2 versions: standard and more powerful “Plus”;
  - › MCB tool for multiple installations.

**Top class casing:**

- › Frameless structure consisting of double-skinned steel, with powder-coated paint (corrosion resistant class – C3), panels;
- › Thermal and acoustic insulation: Mineral wool 20 mm.

**Heat exchanger:**

- › Rotary, aluminium;
- › Rotor gap size: 1.5 mm;
- › Rotor fault indicator;
- › Efficiency up to 77% (EU 1253/2014).

**Fans:**

- › EC type;
- › Specific fan input (SFI) from 0.47 W/(m<sup>3</sup>/h);
- › Long lifetime – fans last for more than 10 years<sup>1</sup>.

**Construction** **Integrated electrical heater.**

<sup>1</sup>~40000 working hours.

**Filters:**

- › Smarty 2R VE: panel filters; ePM10 55%/ePM10 55% (M5/M5);
- › Smarty 2R Ve Plus: pocket filters ePM10 65%/ePM10 65% (M5/M5);
- › Effective filtration of dust, pollens, moulds, spores.

**Integrated control board:**

- › Control of external components : dampers etc.
- › Connection for demand control sensors (CO<sub>2</sub> or RH, presence);
- › Smart el. heater control on/off;
- › Extensive control options: 3 manual modes, boost, calendar, night cooling, etc.

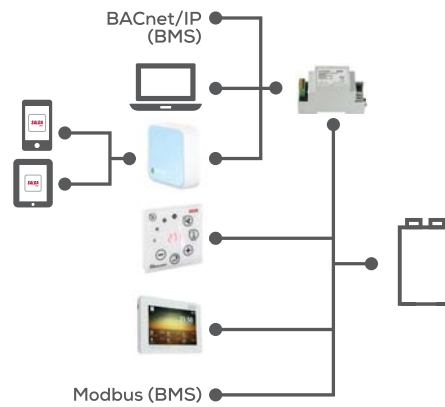
**Air temperature sensors:**

- › Extract, Supply, Outdoor.

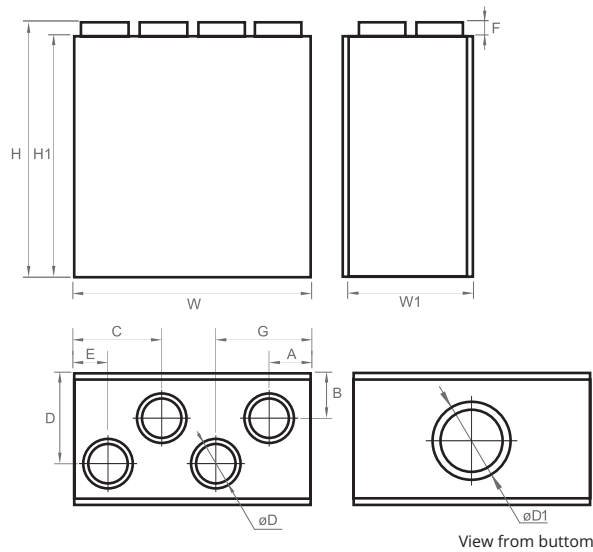
**Cooker hood connection:**

- › d125.

## Control options



## CONSTRUCTION



Unit	Dimensions [mm]												
	A	B	C	D	E	G	W	W1	H	H1	øD	øD1	F
Smarty 2R VE	100	98	224	214	84	237	598	320	653	620	125	175	30
Smarty 2R VE plus	100	98	224	214	84	237	598	320	653	620	125	175	30

Unit	Optional accessories						
	Stouch SA-Control MB-Gateway TL-WR802N	EKA NV PH	AP NP	ALU	S-RC02-F2 S-KFF-U S-RFF-U-D-F2 S-KC02	RSK SKG-A	MUTE
Smarty 2R VE	+	125	125	125	+	125	125
Smarty 2R VE plus	+	125	125	125	+	125	125

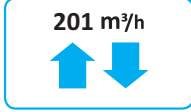
## ACCESSORIES

<b>Network Module</b>  <b>MB-Gateway</b> PRGPU082	<b>Nano Router</b>  <b>TL-WR802N</b> PRGPU105	<b>Remote controller</b>  <b>Stouch</b> PRGPU051	<b>Control panel</b>  <b>SA-Control</b> PRGPU126	<b>Humidity sensor</b>  <b>S-KFF-U</b> ZAKKT0051 <b>S-KFF-U-D-F2</b> ZAKKT0050	<b>CO2 sensor</b>  <b>S-RC02-F2</b> ZAKKT0048 <b>S-RC02</b> ZAKKT0049	<b>Presence detectors</b>  <b>IR24-P</b> ZAKJT019 <b>IR24-PC</b> ZAKJT020	<b>Motion detector</b>  <b>PATROL 701</b> ZAKJT021	<b>Cooker hood</b>  <b>White</b> ZPGKT0041 <b>Stainless steel</b> ZPGKT0042 <b>Slimline</b> ZPGKT0049	<b>Front cover</b>  <b>Stainless steel</b> GNGGAUBTSS1 <b>White</b> GNGGAUBT022	<b>Silencers</b>  <b>MUTE 125x300</b> GSOMUTE005 <b>MUTE 125x600</b> GSOMUTE006 <b>MUTE 125x900</b> GSOMUTE007 <b>MUTE 125x1200</b> GSOMUTE008	<b>Back draft shutter</b>  <b>RSK</b> GSKRSK002
<b>Front cover mounting bracket</b>  <b>Mounting bracket</b> GNGKRON17	<b>Panel filter</b>  <b>MPL (2xePM10 55%)</b> GKOFIL0015 <small>(Smarty 2R VE)</small>  <b>MPL (2xePM10 70%)</b> GKOFIL0016 <small>(Smarty 2R VE plus)</small>	<b>Panel filter</b>  <b>MPL (2xePM10 70%)</b> GKOFIL0016 <small>(Smarty 2R VE plus)</small>	<b>Pocket filters</b>  <b>FMK (2xCoarse 65%)</b> GFIRIRS3002 <small>(Smarty 2R VE plus)</small>	<b>Electric pre-heater</b>  <b>EKA NV 125-0,6-1f PH</b> PSIEKANVPH1250.6_1 <small>(Smarty 2R VE)</small>  <b>EKA NV 125-0,9-1f PH</b> PSIEKANVPH1250.9_1 <small>(Smarty 2R VE plus)</small>	<b>Actuator for air dampers</b>  <b>CM230-F-L</b> ZAKP0076	<b>Damper</b>  <b>SKG-A</b> GSKSG028	<b>Mounting clamp</b>  <b>AP</b> GAPAP002	<b>Coupling</b>  <b>NP</b> GFDNPC002	<b>Outdoor grille</b>  <b>ALU</b> GGRALU002		

The company reserves the right to make changes of technical data without prior notice

# SMARTY R

## Smarty 2R VE



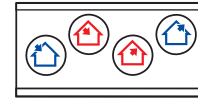
	VER	VEL
<b>Ordering code</b>	GAGSMARTY 1975_0102A	GAGSMARTY 1981_0102A
<b>Electrical data</b>		
Fans	[p/VAC/Hz]	~1/230/50
exhaust	[kW/A]	0.07/0.6
supply	[kW/A]	0.07/0.6
Electrical preheater integrated	[kW/A]	Optional on duct
Electrical heater	[kW/A]	0.6/2,61
Max.power consumption	[kW/A]	0.75 /3.91
Power connection	[p/VAC/Hz]	~1/230/50
Control board		MCB basic
<b>Ecodesign data</b>		
Energy efficiency class	Time control	B
	Local demand control	A
Thermal efficiency of heat recovery	[%]	76,6
Sound power level (Lwa)	[dB(A)]	49
SPI	[W/(m³/h)]	0.47
Maximum internal/external leakage rates	[%]	3.0/2.0
ErP compliance		2018
<b>Other data</b>		
Filters	Supply/Extract	ePM10 55%/ePM10 55% (M5/M5)
Housing insulation, mineral wool	[mm]	20
Colour		white RAL 9016
Weight (net, without packing)	[kg]	36
Housing protection class		IP 34
Operation		Indoors only (heated premises)

\* - ePM10 70% (F7) filter is available as an option

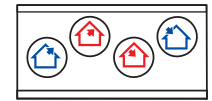
Without frost protection	With optional preheater on duct	Extract air
-23°C/+40°C/ 90%	-40°C/+40°C/90%	+15°C/+40°C/60%



Smarty 2R VEL  
Air intake side (L- left convertible)

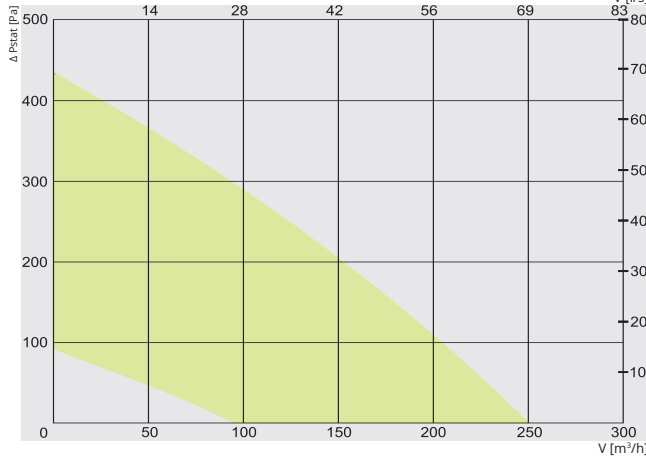


Smarty 2R VER  
Air intake side (D- right convertible)

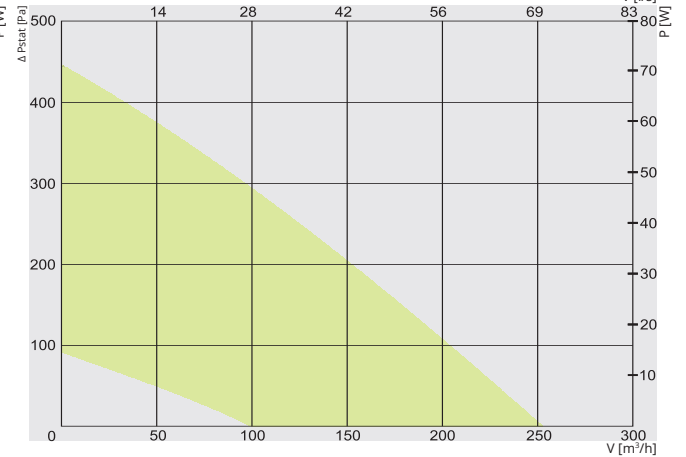


Exhaust air Extract air Outdoor air Supply air Kitchen hood

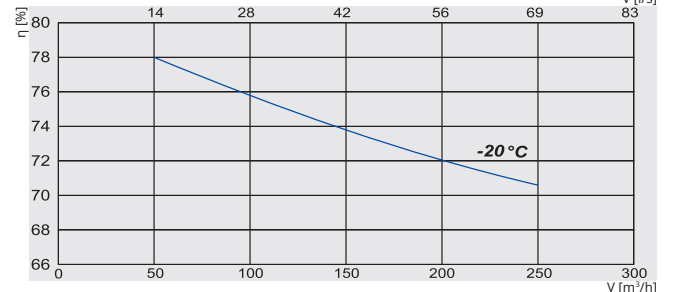
### Supply air



### Exhaust air



### Temperature efficiency

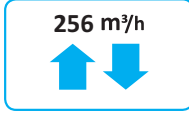


Temperature efficiency (balanced mass flow):  
Extract air = 20°C/60%RH | Outdoor air = -20°C

Smarty 2R VE	L <sub>wa</sub> total, dB(A)	L <sub>wa</sub> , dB(A)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Outdoor	62	22	54	61	48	41	27	20	14
Supply	70	29	61	68	59	60	55	49	43
Extract	62	22	54	61	49	36	28	19	14
Exhaust	69	28	60	67	58	58	52	48	41
Surround	49	10	40	48	36	31	30	30	29

Measured at 140 m³/h, 50 Pa

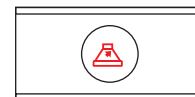
## Smarty 2R VE plus



	VER	VEL
<b>Ordering code</b>	GAGSMARTY 1985_0106A	GAGSMARTY 1984_0106A
<b>Electrical data</b>		
Fans	[p/VAC/Hz]	~1/230/50
exhaust	[kW/A]	0.084/ 0.75
supply	[kW/A]	0.084/ 0.75
Electrical preheater integrated	[kW/A]	Optional on duct
Electrical heater	[kW/A]	0.6/2,61
Max.power consumption	[kW/A]	0.78 /4,13
Power connection	[p/VAC/Hz]	~1/230/50
Control board		MCB basic
<b>Ecodesign data</b>		
Energy efficiency class	Time control	B
	Local demand control	A
Thermal efficiency of heat recovery	[%]	75.9
Sound power level (Lwa)	[dB(A)]	48
SPI	[W/(m³/h)]	0.5
Maximum internal/external leakage rates	[%]	3.0/2.0
ErP compliance		2018
<b>Other data</b>		
Filters	Supply/Extract	ePM10 65%/ePM10 65% (M5/M5)
Housing insulation, mineral wool	[mm]	20
Colour		white RAL 9016
Weight (net, without packing)	[kg]	36
Housing protection class		IP 34
Operation		Indoors only (heated premises)

Without frost protection	With optional preheater on duct	Extract air
-23°C/+40°C/ 90%	-40°C/+40°C/90%	+15°C/+40°C/60%

Smarty 2R VEL plus  
Air intake side (L- left convertible)

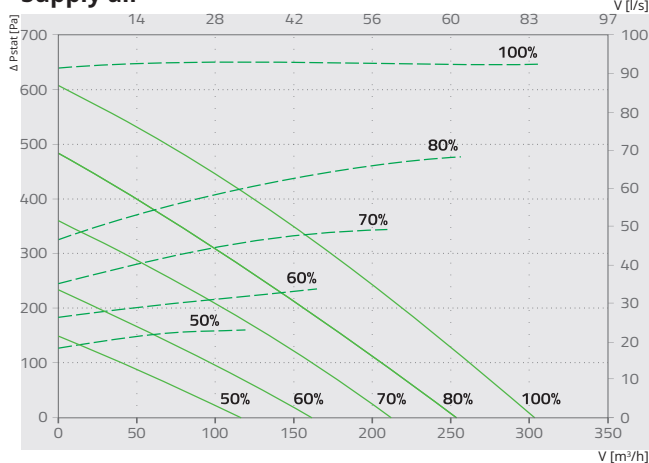


Smarty 2R VER plus  
Air intake side (D- right convertible)

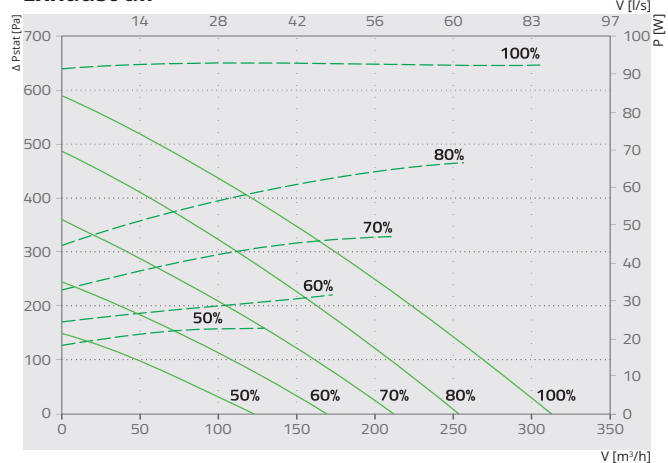


Exhaust air Extract air Outdoor air Supply air Kitchen hood

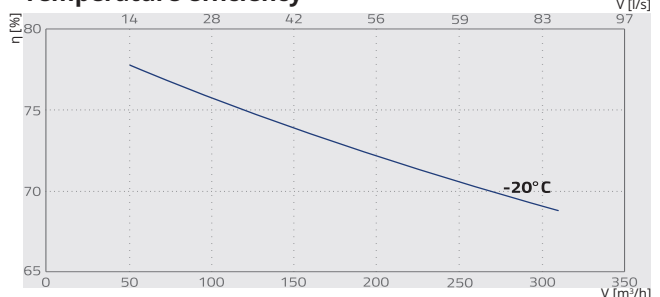
### Supply air



### Exhaust air



### Temperature efficiency



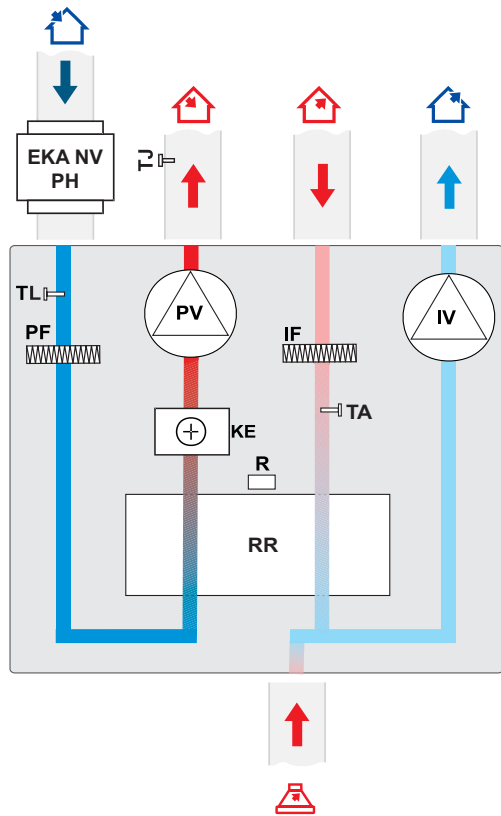
Temperature efficiency (balanced mass flow):  
Extract air = 20°C/60%RH | Outdoor air = -20°C

Smarty 2R VE plus	L <sub>w</sub> total, dB(A)	L <sub>w</sub> , dB(A)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Outdoor	60	18	50	58	55	44	28	16	12
Supply	66	23	55	63	61	56	55	48	40
Extract	60	19	50	58	54	40	35	24	17
Exhaust	66	23	55	62	60	56	53	46	36
Surround	48	3	34	44	45	32	31	30	29

Measured at 180 m³/h, 50 Pa

# SMARTY R

## Smarty 2R VE / 2R VE plus (vertical) with electrical heater



- EKA NV PH** - optional fresh air pre-heater
- TL** - fresh air temperature sensor
- PF** - filter for supply air
- PV** - supply air fan
- KE** - electrical heater
- R** - motor of rotor heat exchanger
- RR** - rotary heat exchanger
- TJ** - supply air temperature sensor
- IF** - filter for extract air
- TA** - extract air temperature sensor
- IV** - exhaust air fan

FUNCTIONS		
Descriptions of the functions	MCB basic	
	Smarty range	
Functions		
	Date and time settings	+
<b>System modes for easy and-user friendly control:</b> Stand-by, Building protection, Economy, Comfort. (Specific air flows are used in the system and they are dedicated to each type of mode.)		+
	<b>BOOST function</b> (Fans operate at highest speed)	+
	<b>Cold/heat recovery</b>	+
	<b>Fire place function</b>	+
	<b>Winter/summer mode</b>	+
	<b>System monitoring</b>	o
	<b>Digital input configuration</b>	+
	<b>Event register (storing up to 50 entries)</b>	+
	<b>Dryness protection</b>	o
	<b>Manual components control</b>	o
	<b>Weekly schedule</b>	+
	<b>Holiday schedule</b>	+
	<b>CO<sub>2</sub> level indication and reduction function</b>	o
	<b>Night cooling function</b>	+
	<b>Relative humidity (RH) level indication and reduction function</b>	o
	<b>Supply air temperature control according to the extract air sensor</b>	+
	<b>Manual components control</b>	o
	<b>Reset to factory defaults</b>	+
Functional units		
<b>Fans</b>		
	<b>Speed synchronous/asynchronous 0-10V control</b>	+
	<b>Protection by RPM</b>	+
<b>Electric heater</b>		
	<b>On/off control</b>	+
<b>Air dampers</b>		
	<b>Outdoor air dampers control</b>	+
<b>Filters clogging monitoring</b>		
	<b>Air filters timer</b>	+
<b>Sensors</b>		
	<b>Supply air temperature sensor</b>	+
	<b>Outdoor air temperature sensor</b>	+
	<b>Extract air temperature sensor</b>	+
<b>Remote controllers</b>		
	<b>S-Touch</b>	x
	<b>Flex MCB</b>	x
	<b>SA Control</b>	x
	<b>MB Gateway</b>	x
<b>Building management system</b>		
	<b>Modbus</b>	+
	<b>BACnet/IP</b>	o

o	Required additional components: CO2 and RH sensors, switches, etc.
+	Standard feature (the number of features depends on the ventilation unit in which the automatics are used); to be configured through BMS network or remote control panel
x	Remote control panels