

Smarty

SMART WAY TO HANDLE THE AIR

SALDA

WWW.SALDA.LT



With sensors: 



Designed for Passive Houses



Smarty

Fresh and healthy air has become a standard in modern buildings. Allergy particles, dust, moulds and noisy surroundings have a negative effect on health and life quality. *Smarty* air handling units are designed to solve all these issues in residential premises. Our clients enjoy the benefits of efficiency, reliability and user-friendly approach.



High efficiency: high savings on electricity and heating;



Reliability: long life components;



No allergies, dust and moulds: fresh air in any season;



Easy maintenance: one person service;

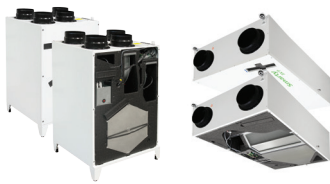


User-friendly control and full automatization: control your climate via PC.



Enjoy the new standard of Smart Air Handling!

APPLICATION

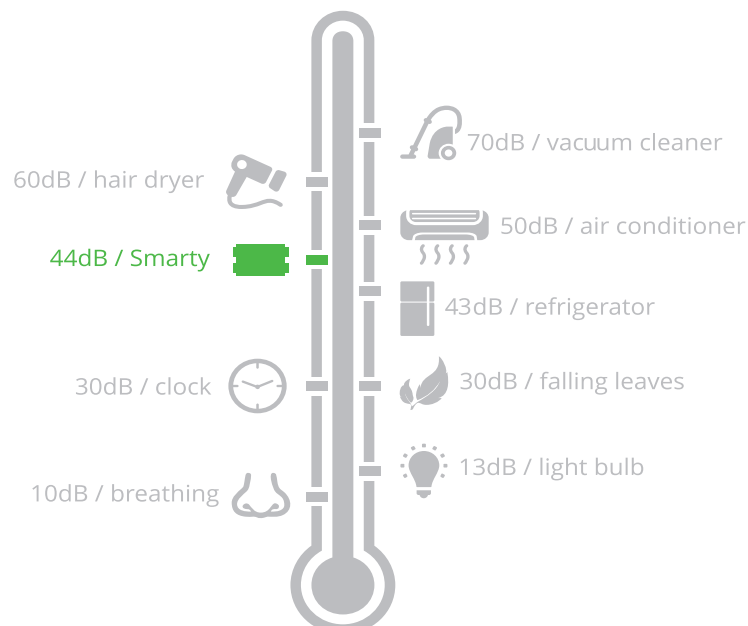


3XV, 3XP for heated premises up to 230 m².



2XV, 2XP for heated premises up to 120 m².

SILENT AIR HANDLING



Modern ventilation must be silent. The Smarty casing sound power level (44 dB) is lower than what most household equipment emits. In living premises, the sound pressure level drops till 25 dB and lower. Relax and rest in the fresh air.

SMARTY - your smart investment!*



◀ lower expenses on heating due to effective heat recovery.



◀ lower expenses on electricity due to effective fans and extremely low air leakage.



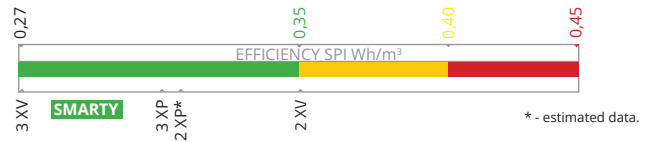
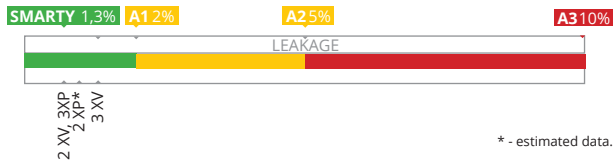
High air tightness

Smarty air handling units are designed to minimize possible air leakage. Their Class A1 air tightness level is an exclusive feature of Salda ventilation equipment.



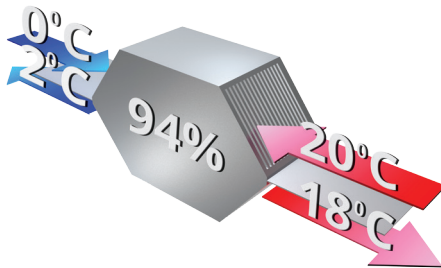
Fan efficiency

Smarty use the highest efficiency EC fans to ensure low energy consumption.



Efficient heat recovery

We have installed efficient counter-flow plate heat exchangers in all our *Smarty* units. *Smarty* heat exchangers may achieve a thermal efficiency up to **94%** (DIBt).



* Calculations are performed according the methodology of COMMISSION REGULATION (EU) No 1253/2014.

HIGH TOTAL ANNUAL SAVINGS

◀ Energy costs for heating and ventilation (Smarty 3X)

	Supplied air heating cost	Energy consumption for fans	Energy to compensate leakages	Your savings with Smarty
Smarty 3XV	€ 183	€ 106	€ 1	
Medium quality HR unit	€ 305	€ 138	€ 5	€ 158
Low quality HR unit	€ 489	€ 177	€ 10	€ 386
No heat recovery	€ 1221	€ 0	€ 0	€ 931

◀ Energy costs for heating and ventilation (Smarty 2X)

	Supplied air heating cost	Energy consumption for fans	Energy to compensate leakages	Your savings with Smarty
Smarty 2XV	€ 92	€ 61	€ 1	
Medium quality HR unit	€ 153	€ 69	€ 3	€ 72
Low quality HR unit	€ 244	€ 89	€ 6	€ 181
No heat recovery	€ 611	€ 0	€ 0	€ 458

SUITABLE FOR TIGHT SPACES

We know that it is sometimes hard to find a place for new equipment, so a compact design was one of our goals. You can always find a place for *Smarty*.



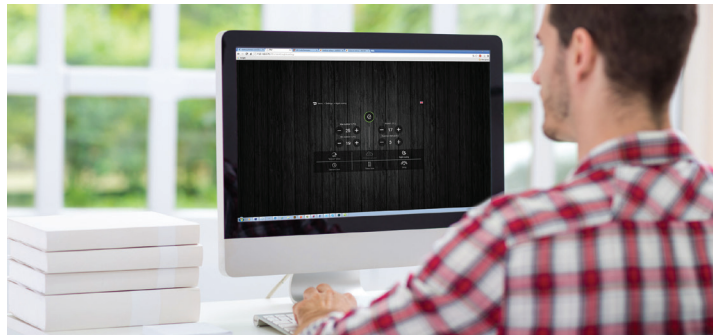
USER-FRIENDLY CONTROL

Smarty air handling units can be managed by:

- › optional Ptouch or Stouch remote controllers;
- › remote control via PC MB-Gateway or building management system connections;
- › demand level control sensors:



With MB-Gateway you can control your climate via PC even when you are far away from home.



Save money and enjoy full comfort by using smart control options:



Away from home?

Reduce electricity and heating costs by using building protection mode or calendar events;



Variable number of people in your premises?

With CO₂ sensors air handling units provide the required airflow levels for a healthy climate and save electricity when the number of visitors decreases;



Hot summers with cool nights?

Use night-cooling to reduce the temperature in your premises and save money on air conditioning.

ONE PERSON MAINTENANCE

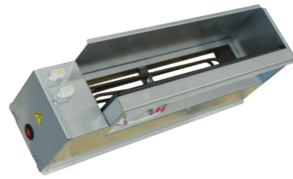
Our approach is to simplify all the necessary maintenance work. The easy access to internal components, quick filter change and ordering system enable you to save time and money on expensive maintenance services.

Contaminated filters increase pressure losses, which lead to higher electricity consumption. A visual warning of a filter change helps you to avoid unnecessary expenses.

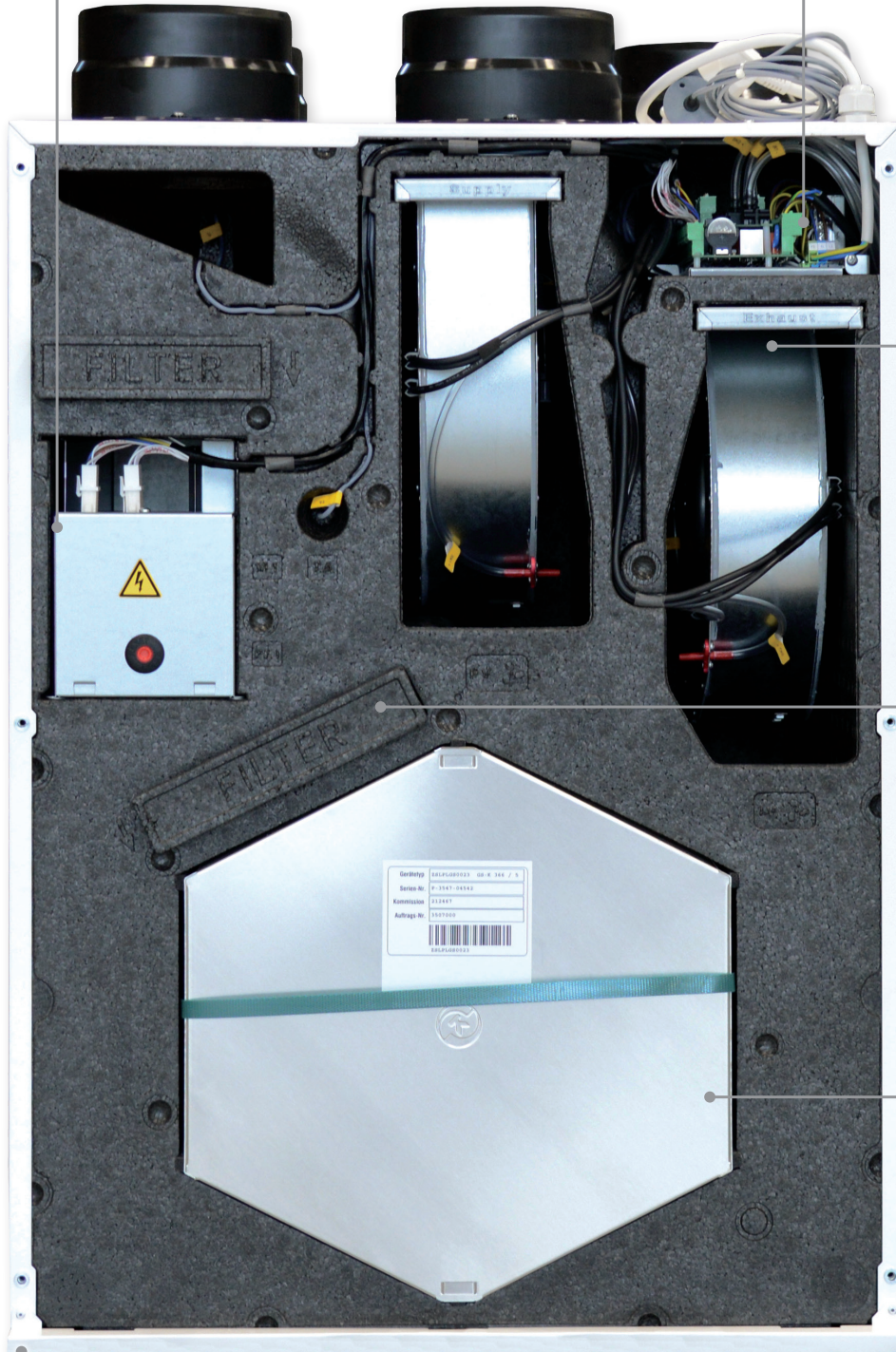


CONSTRUCTION*

- > **By-pass actuator with integrated pre-heater**
- > 100% summer bypass.



- > **Integrated control board**
- > Integrated pressure switches for balanced and constant airflow;
- > Control of external components: pre-heater, heater, dampers, etc;
- > Extended control possibilities: Stouch, Ptouch, PC via MB-Gateway, BMS.



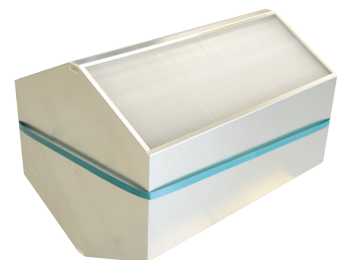
- > **New generation EC fans, EBM-papst RadiCal**
- > Low electricity consumption. Specific fan input (SFI) from 0.27 W/(m³/h);
- > Long lifetime – fans last for more than 10 years.



- > **Filters:**
- > High efficiency G4/G4 filters;
- > Optional F7 filter for maximum filtration of spores and moulds, fine particles and bacteria;
- > Long service period – up to **6 months!**



- > **Premium plastic plate heat exchanger**
- > Efficiency up to **94% (DIBt)** / **85% (Passivhaus)**.



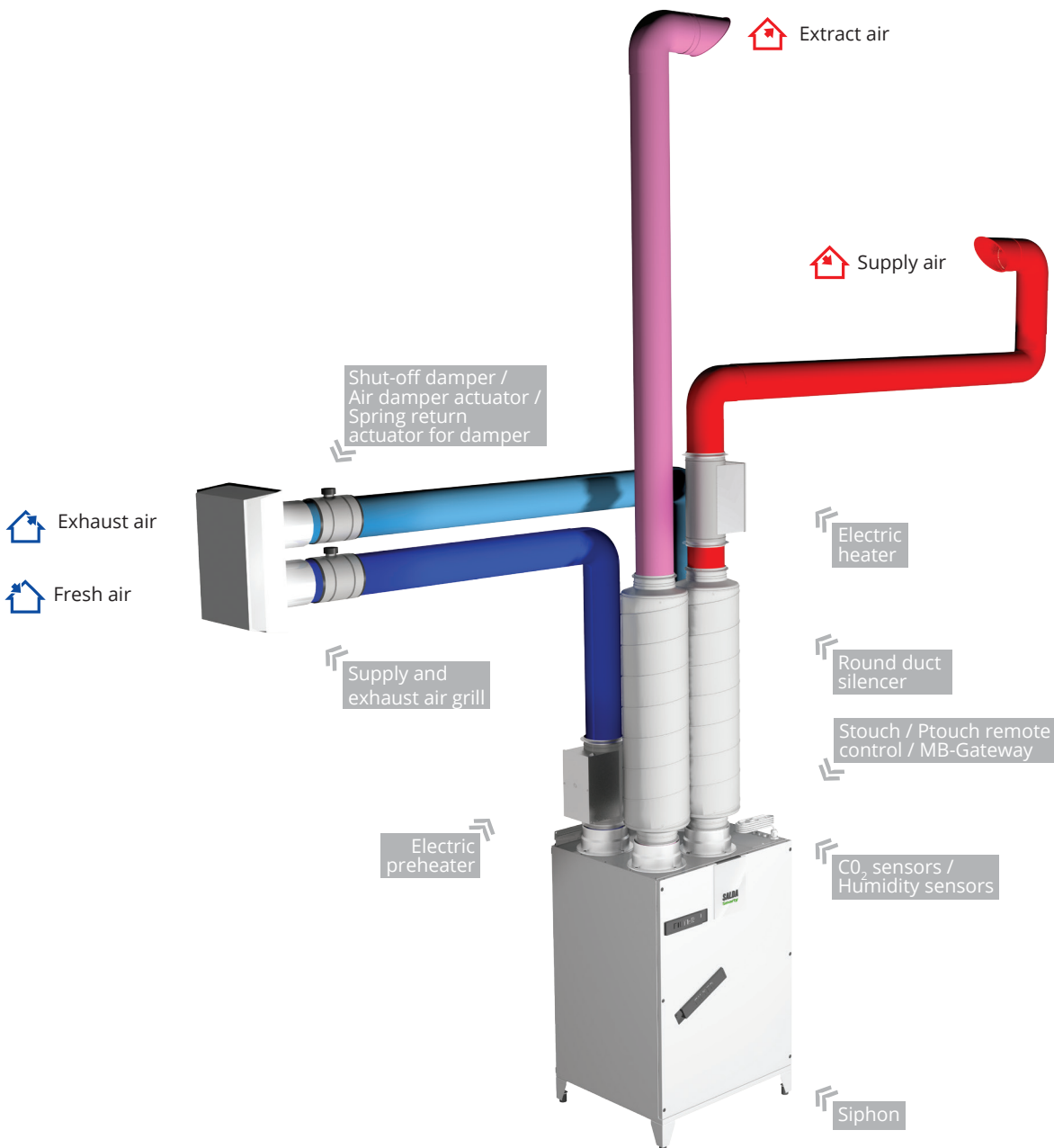
- > **High class casing**
- > 1 layer of galvanized steel and an EPP of 20-30 mm guarantees premium **A1** class air tightness, **reduces the sound** level and eliminates heat losses.
- > The external side is powder coated – corrosion class **C3**. It enables the installation of equipment even in premises with high humidity and some air pollution (laundry rooms, food processing premises, garages, basements, etc.).

* - image is based on Smarty 3X V; construction of other *Smarty* units may differ.








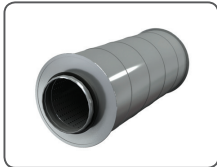





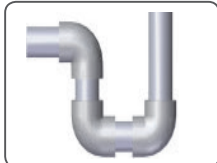
CONNECTION DIAGRAM

Complete system from one source*



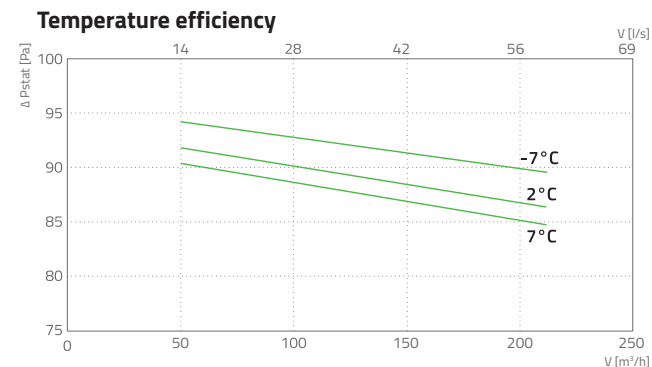
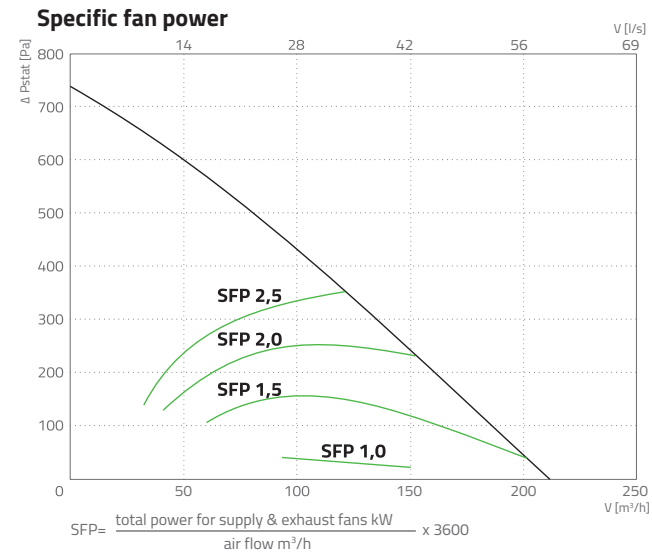
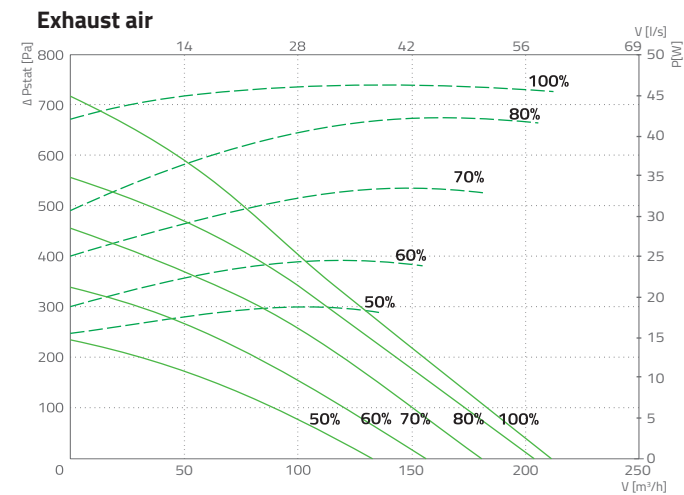
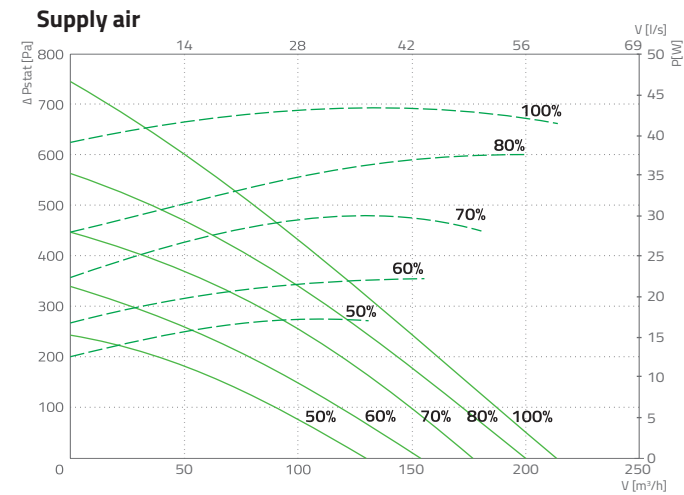
* Smarty 2XV/3XV version V1.1 is equipped with integrated pre-heater.

Full set of accessories for your ventilation system:

Supply and exhaust air grill	Shut-off damper	Air damper actuator	Spring return actuator for damper	Electric preheater/ heater	Round duct silencer
					
CO ₂ sensors	Humidity sensors	Stouch remote control	Ptouch remote control	MB-Gateway	Siphon
					

TECHNICAL DATA

Smarty 2X V



— Performance
- - - Power consumption



Smarty 2X V



View from inspection side

Exhaust air Extract air outdoor air Supply air

Smarty 2X V			
EC fans	phase/voltage	[50Hz/ VAC]	~1, 230
exhaust	power/current	[kW/A]	0,035/0,35
	fan speed	[min ⁻¹]	4060
supply	power/current	[kW/A]	0,035/0,35
	fan speed	[min ⁻¹]	4060
Thermal efficiency up to*			94%
Max power consumption			[kW/A] 0,67/3,30
Filter class		exhaust/ supply	G4/G4 (F7 optional)
Housing insulation, Elastic Polyether Polyurethane		[mm]	30
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	25
Comply with ERP			2018
Operation			indoors
Dimension (LxWxH)		[mm]	595x315x700
Housing protection class		IP	34

*DIBt and EN13141-7

Temperature efficiency (balanced mass flow):
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Smarty 2X V	L _{wa} total, dB(A)	L _{WA} dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	51	41	45	46	43	41	37	33
Extract	48	38	42	43	39	37	31	29
Surrounding	46	28	39	43	37	33	18	16

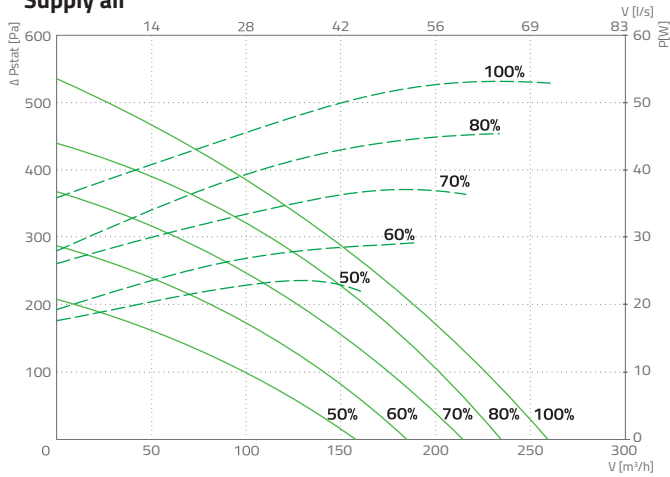
Measured at 177 m³/h, 50 Pa

Certifications
EUROVENT certified
heat exchanger performance

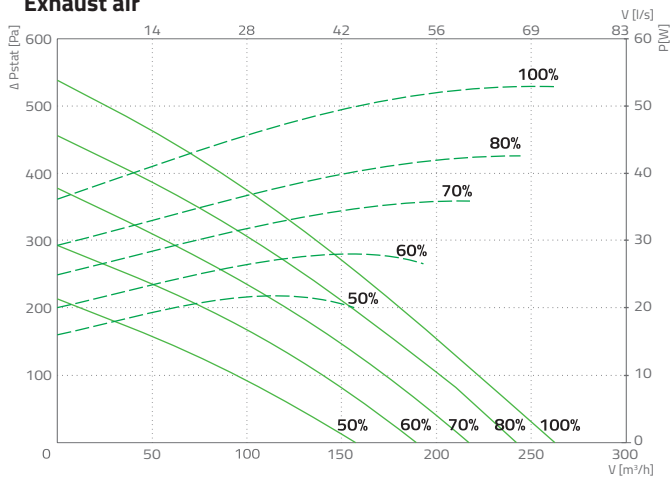


Smarty 2X P

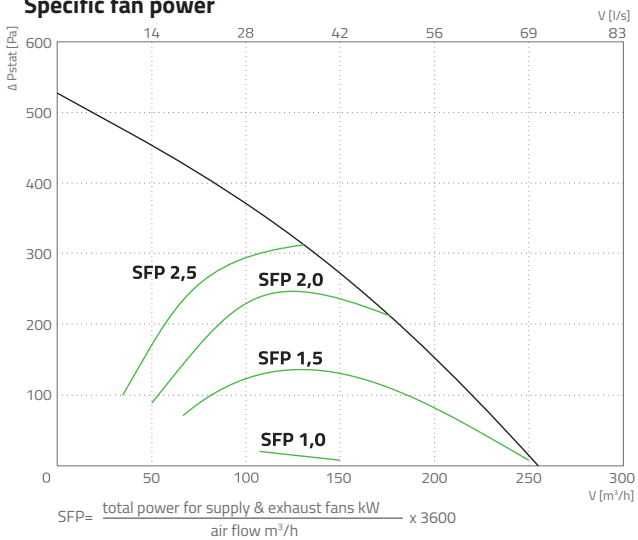
Supply air



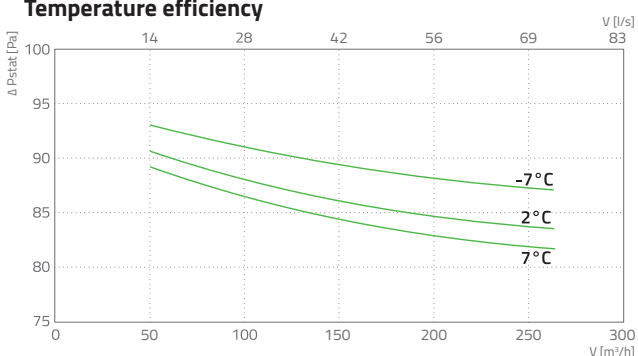
Exhaust air



Specific fan power



Temperature efficiency



— Performance
- - - Power consumption



Smarty 2X P



🏠 Exhaust air
 🏠 Extract air
 🏠 outdoor air
 🏠 Supply air

Smarty 2X P

EC fans	phase/voltage	[50Hz/ VAC]	~1, 230
exhaust	power/current	[kW/A]	0,051/0,4
	fan speed	[min ⁻¹]	4525
supply	power/current	[kW/A]	0,051/0,4
	fan speed	[min ⁻¹]	4525
Thermal efficiency up to*			94%
Max power consumption			[kW/A] 0,11/0,9
Filter class	exhaust/ supply	G4/G4 (F7 optional)	
Housing insulation, Elastic Polyether Polyurethane	[mm]	20-30	
Colour	RAL	white 9016	
Weight (net, without packing)	[kg]	40	
Comply with ERP		2018	
Operation		indoors	
Dimension (LxWxH)	[mm]	1009x590x250	
Housing protection class	IP	34	

*DIBt and EN13141-7

Temperature efficiency (balanced mass flow):
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Smarty 2X P	L _{wa} total, dB(A)	L _{wa} , dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	59	44	52	51	53	53	51	36
Extract	55	42	47	47	50	48	44	29
Surrounding	46	30	38	44	39	33	26	23

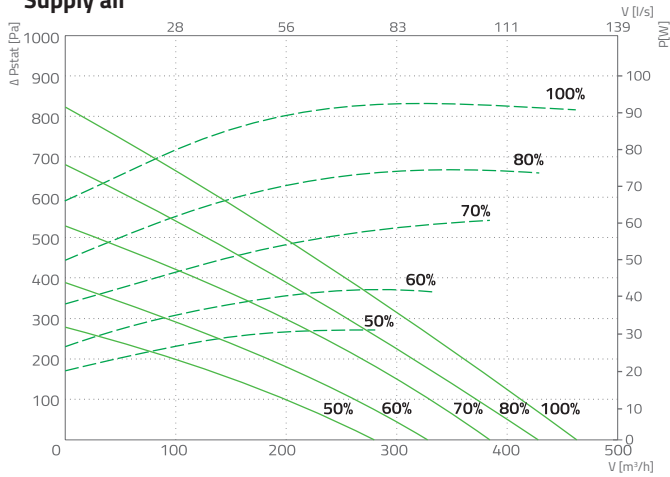
Measured at 153 m³/h, 50 Pa

Certifications
EUROVENT certified
heat exchanger performance

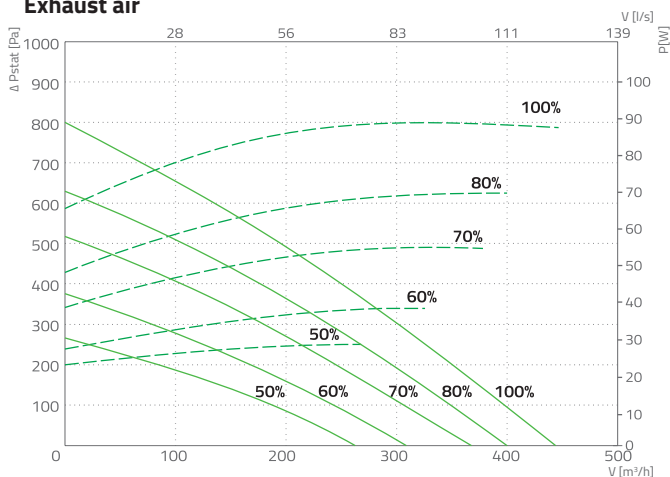


Smarty 3X V

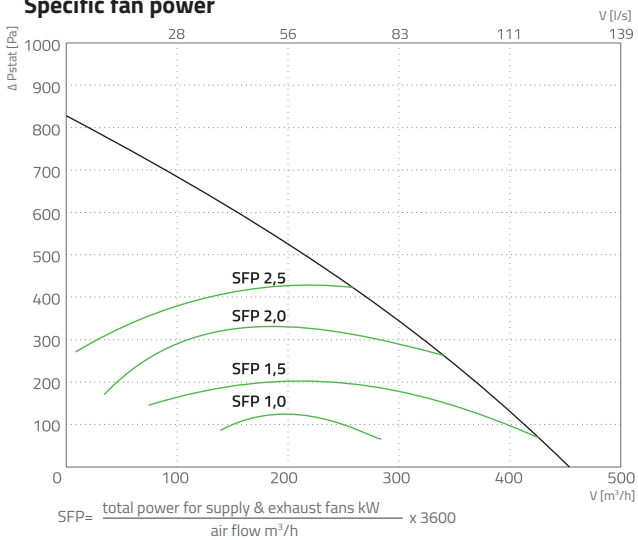
Supply air



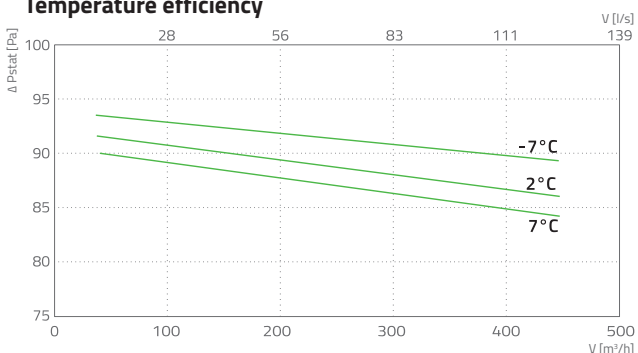
Exhaust air



Specific fan power



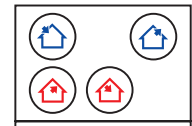
Temperature efficiency



— Performance
- - - Power consumption



Smarty 3X V



View from inspection side

Exhaust air Extract air outdoor air Supply air

Smarty 3X V

EC fans	phase/voltage	[50Hz/ VAC]	~1, 230
exhaust	power/current	[kW/A]	0,083/0,75
	fan speed	[min ⁻¹]	3200
supply	power/current	[kW/A]	0,083/0,75
	fan speed	[min ⁻¹]	3200
Thermal efficiency up to*			94%
Max power consumption			[kW/A] 1,37/6,70
Filter class	exhaust/ supply	G4/G4 (F7 optional)	
Housing insulation, Elastic Polyether Polyurethane	[mm]	50	
Colour	RAL	white	9016
Weight (net, without packing)	[kg]	39	
Comply with ERP	2018		
Operation	indoors		
Dimension (LxWxH)	[mm]	599x538x810	
Housing protection class	IP	34	

*DIBt and EN13141-7

Temperature efficiency (balanced mass flow):
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Smarty 3X V	L _{wa} total, dB(A)	L _{wa} , dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	55	46	48	49	48	46	45	42
Extract	51	43	45	44	42	41	39	35
Surrounding	46	31	41	43	35	30	25	22

Measured at 285 m³/h, 50 Pa

Certifications

EUROVENT certified
heat exchanger performance

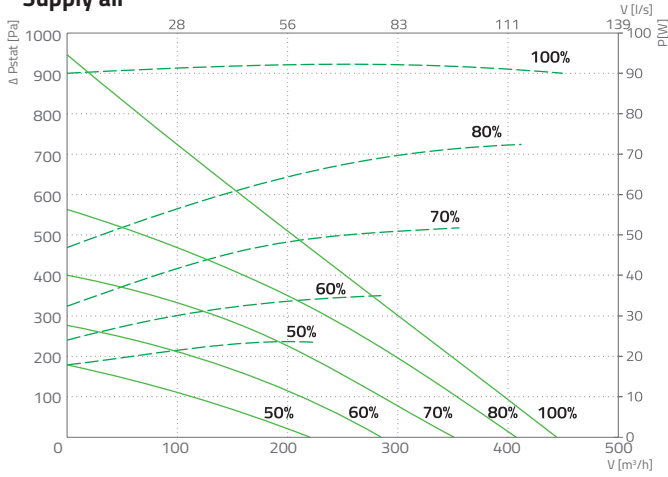


Smarty 3X P

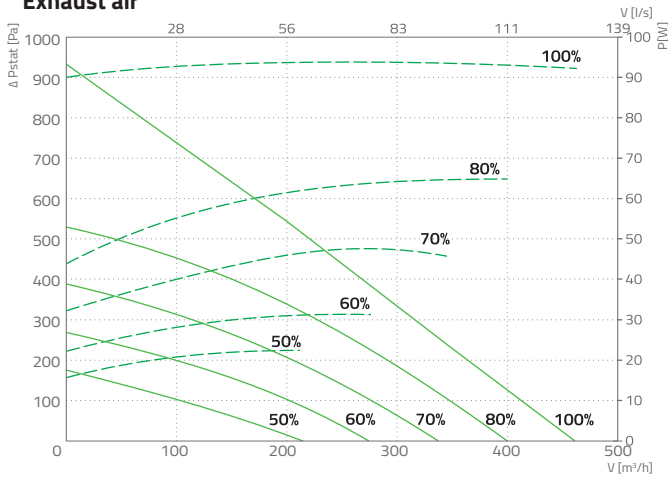
Performance

Power consumption

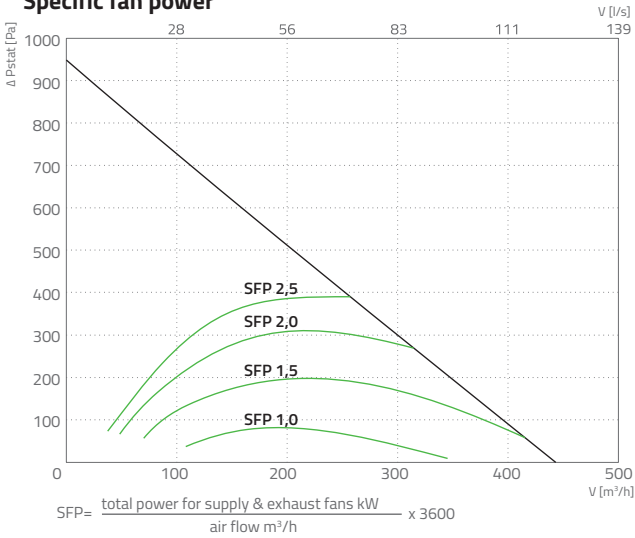
Supply air



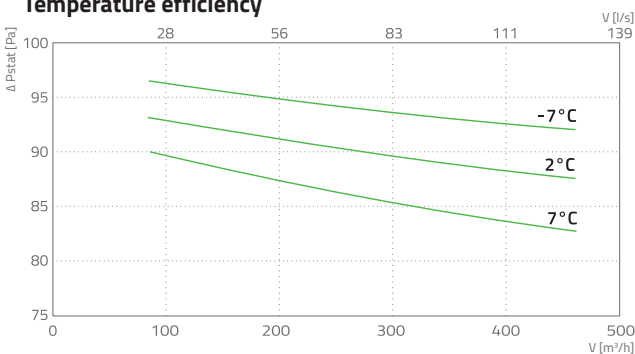
Exhaust air



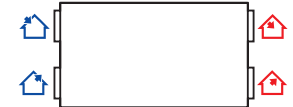
Specific fan power



Temperature efficiency



Smarty 3X P



View from inspection side

- Exhaust air
- Extract air
- outdoor air
- Supply air

Smarty 3X P

EC fans	phase/voltage	[50Hz/ VAC]	~1, 230
exhaust	power/current	[kW/A]	0,084/0,75
	fan speed	[min ⁻¹]	3200
supply	power/current	[kW/A]	0,084/0,75
	fan speed	[min ⁻¹]	3200
Thermal efficiency up to*			94%
Max power consumption			[kW/A] 0,168/1,5
Filter class	exhaust/ supply	G4/G4 (F7 optional)	
Housing insulation, Elastic Polyether Polyurethane	[mm]	30	
Colour	RAL	white	9016
Weight (net, without packing)	[kg]	53	
Comply with ERP		2018	
Operation		indoors	
Dimension (LxWxH)	[mm]	1225x685x318	
Housing protection class	IP	34	

*DIBt and EN13141-7

Temperature efficiency (balanced mass flow):
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Smarty 3X P	$L_{w, total}$, dB(A)	125 Hz	250 Hz	500 Hz	$L_{w, dB(A)}$	1 kHz	2 kHz	4 kHz	8 kHz
Supply	57	49	50	53	48	47	45	40	
Extract	50	41	43	44	42	39	37	34	
Surrounding	42	34	35	36	34	32	31	27	

Measured at 230 m³/h, 99 Pa

Certifications

EUROVENT certified
heat exchanger performance



MAIN FUNCTIONS

Description of the functions	MCB	MiniMCB	MiniMCB basic
	Smarty 3X P	Smarty range	
	E	E	E
Functions			
Date and time settings	✓	✓	✓
System modes for easy and user-friendly control: Stand-by, Building protection, Economy, Comfort. (Specific air flows are used in the system)	✓	✓	✓
BOOST function	✓	✓	✓
Comfortable air temperature function	✓	✓	✓
Cold/heat recovery	✓	✓	✓
Fireplace function	✓	✓	✓
Heating season (from a selected date, 3-day temperature average or manually)	✓	✓	✓
Dryness protection	✓	✓	✓
Weekly schedule	✓	✓	✓
Holiday schedule	✓	✓	✓
User and service control levels	✓	✓	✓
Automatic air flow balancing (using integrated pressure transducers)	✓	✓	
Manual air flow balancing	✓	✓	✓
CO ₂ level indication and reduction function	✓	✓	
Night cooling function	✓	✓	✓
Relative humidity (RH) level indication and reduction function	✓ P	✓ P	✓ P
Software and configuration update possibility	✓	✓	✓
Supply air temperature control according to the extract air sensor	✓	✓	✓
Monitoring function (all sensors and I/O)	✓	✓	✓
Mode switch (start/stop)	✓	✓	✓
Manual components control	✓	✓	✓
Functional units			
Electric heater			
On/Off / PWM control	✓	✓	✓ 1
Manual protection	✓	✓	✓ 2
Automatic protection	✓	✓	✓ 2
Overheat protection (Additional protection software)	✓	✓	✓
Electric pre-heater			
On/Off / PWM control	✓	✓	✓ 1
Pre-heater manual/automatic protection (NC)	✓	✓	✓ 2
Water cooler			
Temperature sensor	✓		
Bypass damper			
3-position actuator control	✓		
Step motor control	✓	✓	✓
Filter pollution monitoring			
By pressure switch (NC)	✓	✓	
By filter timer	✓	✓	✓
Sensors			
Temperature sensor input calibration (Calibration is carried out by standard)	✓	✓	✓
Temperature sensor failure protection (with emergency mode)	✓	✓	✓
Emergency signals and inputs/outputs			
Fire damper actuator control On/Off	✓		
Fire damper test function	✓		
Fire protection input	✓	✓	✓
Working indication output	✓	✓	
Alarm indication output	✓	✓	
Fireplace protection (NC)	✓	✓	
Remote controllers			
Stouch	✓	✓	✓
Ptouch	✓	✓	✓
MB-Gateway	✓	✓	✓

1 A MiniMCB basic can only control the pre-heater or heater.

2 A MiniMCB basic only has protection for the pre-heater or heater.

P This function will be available in the 2Q, 2016.

SMARTY AIR HANDLING UNITS ARE AVAILABLE IN SEVERAL CONTROL VERSIONS

Save on equipment: select the unit according to the climate zone and project requirements.

Product name	Smarty 2X V 1.1	Smarty 2X V 1.2	Smarty 2X V 1.3	Smarty 3X V 1.1	Smarty 3X V 1.2	Smarty 3X V 1.3	Smarty 2X P 1.1	Smarty 2X P 1.2	Smarty 3X P 1.1	Smarty 3X P 1.2	Smarty 3X P 1.3	Smarty 3X P 1.4
Control board	Mini MCB	Mini MCB Basic	Mini MCB Basic	Mini MCB	Mini MCB Basic	Mini MCB Basic	Mini MCB	Mini MCB Basic	Mini MCB	Mini MCB Basic	Mini MCB Basic	MCB
Version	Premium	Advanced	Basic	Premium	Advanced	Basic	Premium	Advanced	Premium	Advanced	Basic	Premium *
Heat recovery	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temp. control	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bypass damper	✓	✓		✓	✓		✓	✓	✓	✓		✓
Pressure sensor (filter pollution monitoring)				✓					✓			✓
Integrated pre-heater	✓			✓								
Optional heating elements												
Duct-based pre-heater		✓*	✓*		✓*	✓*	✓	✓*	✓	✓*	✓*	✓
Duct-based heater	✓	✓*	✓*	✓	✓*	✓*	✓	✓*	✓	✓*	✓*	✓

* - only with pre-heater or heater.

Verified by*:



EPDB



PCDB



Ekofund



CasaClima



Tested in independent Laboratory "Siventa", according EN ISO/IEC 17025.
 Performed tests:
 > Aerodynamic,
 > Thermal
 > Acoustic
 > Electrical performance
 > Sound power level
 > Sound energy level determination.

* Smarty 3X P

Distributor



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