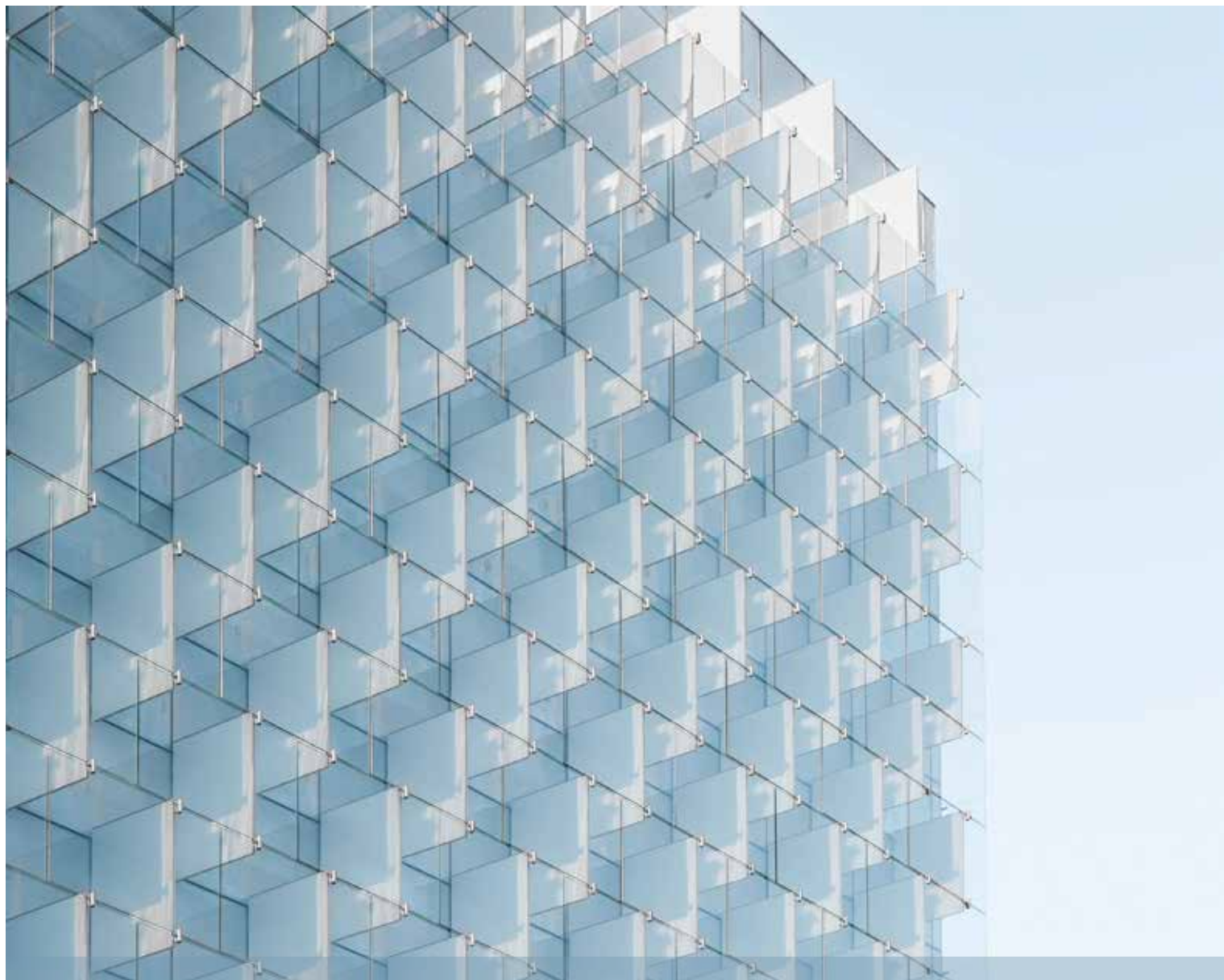


***komfovent®***



# VERSO

Commercial ventilation units



# VERSO air handling units

## High energy performance standards



### Efficient heat exchangers

The efficiency of heat exchangers can reach up to 90%. Heat exchangers effectively save the thermal energy and significantly reduce the costs for indoor ventilation.

### Control system C5

Smart integrated control system C5 offers a wide range of control options that ensure maximum energy savings and maintain a high level of comfort in ventilated areas at the same time.

### Ultra Premium motors

Ultra Premium efficiency IE5 class fans motors minimize power consumption and ensure durability of the unit.



### A quick and accurate selection

- Convenient VERSO selection software allows you to choose the proper unit from a wide range in just a few minutes.
- Digital model of VERSO units in REVIT.
- The KOMFOVENT website and catalog contain detailed technical information about VERSO units.

### Convenient and quick installation

- "Plug and Play" solution. All components of automatic control are installed and tested at the factory.
- A wide range of units allows you to select optimal and most efficient solution.
- The modular design allows the equipment to be transported through a standard 900 mm wide door opening.

### Quality and reliability

- VERSO air handling units and heat exchangers are tested in the independent testing centres in Germany and Switzerland.
- Factory assembled and tested units.
- VERSO selection software and equipment are regularly verified by Eurovent, ÜV and RLT specialists.



## VERSO series and range

VERSO units are designed for efficient ventilation and are suitable for various types of projects. You can choose unified unit from VERSO Standard series, or VERSO Pro which can be specifically tailored to meet your requirements.

Large number of configurations (vertical, horizontal, flat and universal type, with rotary or plate heat exchangers) allows you to select optimal and most efficient solution.



**Verso R**  
units with a rotary  
heat exchanger



**Verso CF**  
units with a counterflow  
plate heat exchanger



**Verso P**  
units with a plate  
heat exchanger



**Verso S**  
supply air  
units

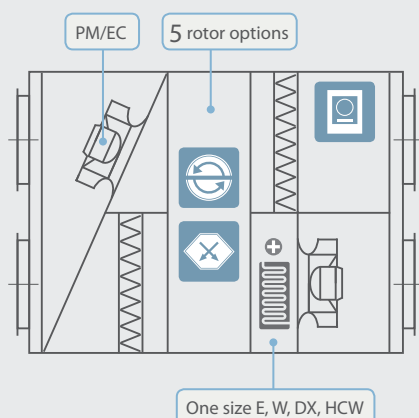
### VERSO Standard



800 – 7000 m<sup>3</sup>/h



- ✓ Vertical, horizontal, flat or universal application
- ✓ Compact design
- ✓ REVIT models



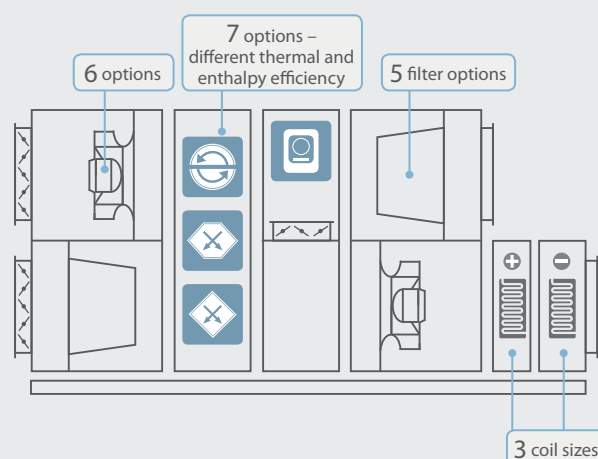
### VERSO Pro



1000 – 40 000 m<sup>3</sup>/h



- ✓ 10 basic sizes for various combinations
- ✓ Professionally convenient software
- ✓ Selection of desired heat exchanger, fan, heater/cooler
- ✓ REVIT models



# VERSO Standard

## standardized units for commercial premises



Capacity  
800 – 7000  
m<sup>3</sup>/h



Vertical



Horizontal



Universal



False ceiling



Rotary or plate  
heat exchanger



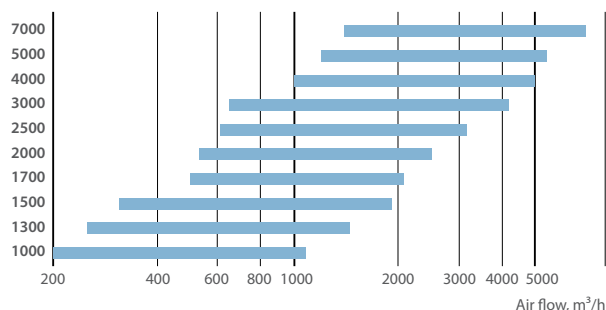
Integrated  
control system

### Verso R Standard

Verso R Standard units efficiently save energy all year round by significantly reducing both heating and air conditioning costs. Ideal for cold climate countries. Sorption rotary heat exchangers maintain optimal microclimate in the premises.



Sizes and capacities of Verso R Standard

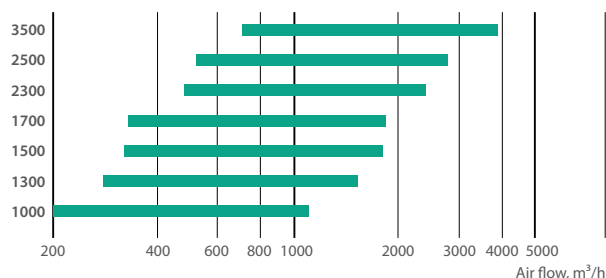


### Verso CF Standard

Verso CF Standard units are ideal for mild and warm climate countries.



Sizes and capacities of Verso CF Standard

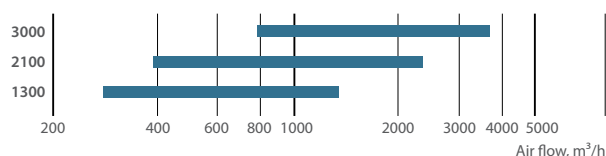


### Verso S Standard

Low-height false ceiling supply air handling units are easily installed even in the smallest premises.



Sizes and capacities of Verso S Standard



## The latest technological solutions implemented in VERSO Standard units



### PM/EC fans with reduced power consumption

Super Premium IE4 class fans and Ultra Premium efficiency IE5 class fans used in VERSO Standard units minimize power consumption and ensure durability of the unit.



### Sorption rotary heat exchanger

Sorption rotary heat exchanger, which is coated with special hygroscopic zeolite coating, controls the humidity in the premises more efficiently than a condensing rotor. The humidity from exhaust air is used to humidify the outdoor air in winter. Wet outdoor air is dried in summertime. As a result, high comfort is ensured all year long.



### Universal duct connections

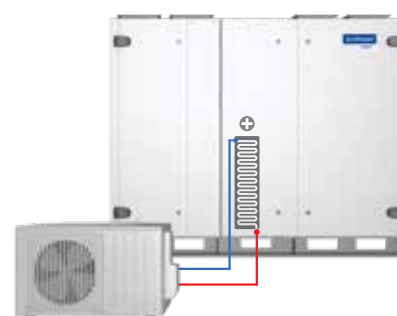
One of the main advantages is the multipurpose application of one unit – the same unit can be connected to the ducts horizontally or vertically.

An installer can always reverse the unit into the required version and choose the duct connection's position on site. One air handling unit has lots of connecting positions.







































### Integrated DX coil

All VERSO Standard units of universal type can be ordered with integrated DX coil with possibility of cooling and heating. Wide range of inverter outdoor units can be offered together.





# VERSO Standard air handling units. Specifications

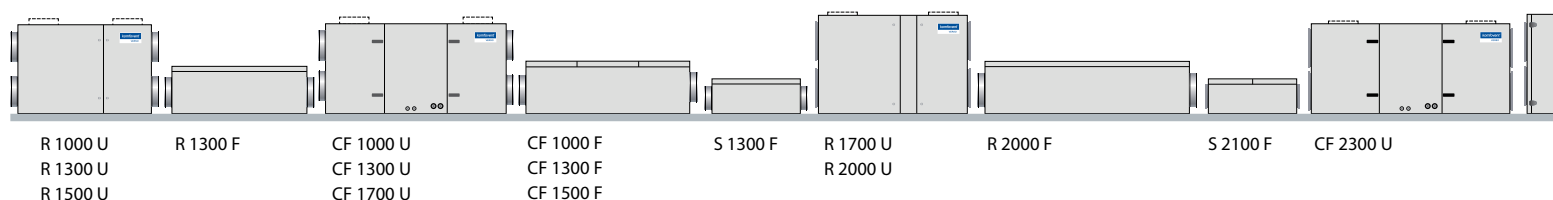
Unit size		1000			1300				1500		1700		
AHU type													
Heat exchanger type													
AHU version													
Nominal air flow according to ErP 2018	m³/h	920	1050	850	1380	1200	1340	1340	1300	1530	1475	1780	1530
Dimensions	B, mm	906	910	1100	906	940	910	1100	700	906	1100	910	910
	H, mm	905	905	527	905	480	905	527	350	905	527	1000	905
	L, mm	1355	1810	1650	1355	1360	1810	1650	893	1355	1650	1485	1810
Unit weight	kg	196	269	173	203	144	225	175	46	206	190	220	220
Duct connections	mm	Ø 315 (4x)	Ø 315 (4x)	Ø 315 (4x)	Ø 315 (4x)	Ø 315 (4x)	Ø 315 (4x)	Ø 315 (4x)	Ø 250 (2x)	Ø 315 (4x)	Ø 315 (4x)	300×400 (4x)	Ø 315 (4x)
Max. operating current with electric air heater	A	7,3	9,5	7,3	11,7	10,7	11,7	11,7	15,7 / 24,4	12,9	12,9	12,9	12,9
Max. operating current with water air heater	A	3,3	3,3	3,3	5,5	6,7	5,5	5,5	3,0	6,7	6,7	6,7	6,7
Supply voltage	V/Hz	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230
Fans type		EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC
Electric power input of the fan drive at maximum flow rate	W	180	178	168	270	370	370	360	350	450	460	470	470
Integrated heater type: E – electric, W – water, HCW – changeover coils, DX – direct expansion		E, W, HCW, DX	E, W, HCW, DX	E	E, W, HCW, DX	E	E, W, HCW, DX	E	E, W	E, W, HCW, DX	E	E, W, HCW, DX	E, W, HCW, DX
Nominal electric heater capacity	kW	3,0	4,5	3,0	4,5	3,0	4,5	4,5	9 / 15	4,5	4,5	4,5	4,5































## STANDARD SPECIFICATIONS:

Standard filter class  
(supply/exhaust) –  
ePM1 55% / ePM10 50% (F7/M5)

C5 control system  
is integrated  
in all VERSO units

## VERSO Standard units



	2000		2100	2300	2500		3000			3500	4000	5000		7000
so CF	Verso R	Verso R	Verso S	Verso CF	Verso R	Verso CF	Verso R	Verso R	Verso S	Verso CF	Verso R	Verso R	Verso R	Verso R
														
														
515	2170	2080	1900	1990	2800	2590	3450	3300	3800	3540	3500	5000	5250	6680
10	910	1210	1000	910	1000	2000	1150	1210	1015	1150	1150	1405	1300	1500
05	1000	527	350	905	1000	528	1150	648	555	1150	1150	1400	1300	1520
310	1485	2060	893	2000	1606	1850	2100	2160	1160	2500	2100	1900	1872	1892
43	210	280	73	250	289	340	456	289	130	500	470	600	442	765
315 (4x)	300x400 (4x)	Ø 355 (4x)	700x250 (2x)	300x400 (4x)	700x300 (4x)	700x300 (4x)	400x500 (4x)	500x400 (2x)	600x400 (2x)	400x500 (4x)	400x500 (4x)	250x1100 (4x)	1000x500 (4x)	1200x600 (4x)
2,9	16,9	16,8	24,7 / 35,6	16,8	22	16,9	19,8	19,9	—	19,8	31,1	29,5	—	—
7,7	6,3	6,3	3,3	6,3	11,7	6,3	7,1	7,1	3,8	7,1	9,7	8,1	13,1	18,1
3~400 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	HE 3~400 HW 1~230	3~400	3~400	3~400	3~400	3~400	3~400	3~400	3~400
EC	EC	EC	EC	EC	EC	EC	PM	PM	PM	PM	PM	EC	PM	PM
65	650	670	340	660	520	640	850	720	629	960	1830	1215	1000	1340
W, W, DX	E, W, HCW, DX	E	E, W	E, W, HCW, DX	E, W	E	E, W, HCW, DX	E	W	E, W, HCW, DX	E, W, HCW, DX	E, W, DX	W	W
7,5	7,5	7,5	15 / 22,5	7,5	7,5	7,5	9	9	—	9	15	15	—	—

# LEGEND:

Heat exchanger type:



rotary



counterflow



supply air unit

Duct connection:



universal



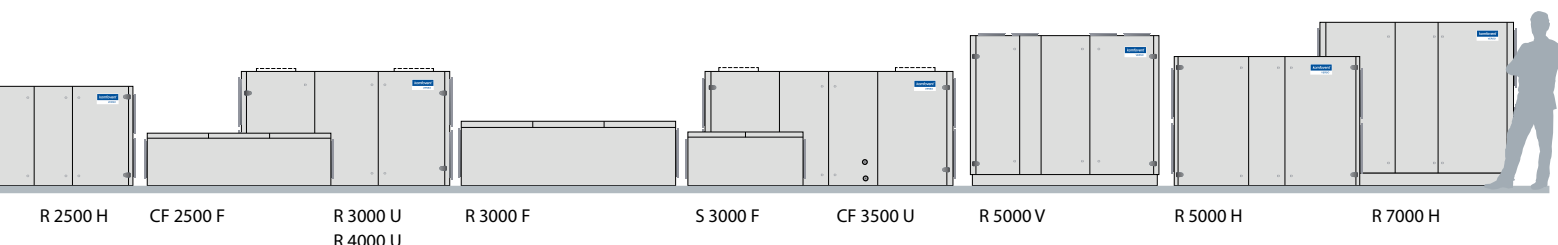
horizontal



vertical



false ceiling



# VERSO Pro

## modular units for professionals



Capacity  
1000 – 40 000  
m³/h



Compact modular design

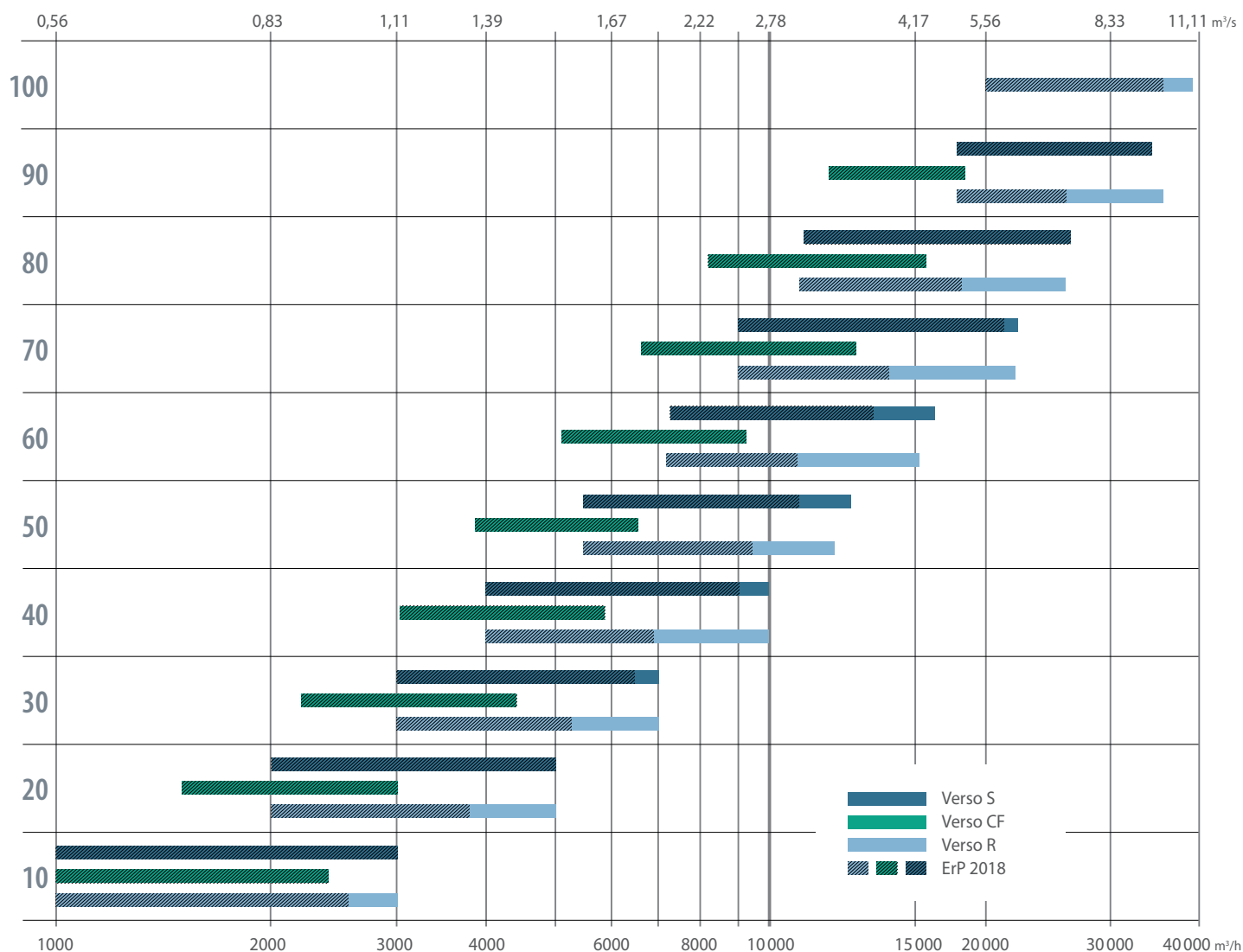


Rotary or plate  
heat exchanger



**C5**  
Integrated  
control system

Sizes and capacities of VERSO Pro units





## The latest technological solutions implemented in VERSO Pro units



### Energy recovery with rotary heat exchanger

Non-freezing condensing or sorption rotary heat exchangers efficiently recover the heat and the cold. The recovery may reach up to 86 %.

### Humidity control by sorption rotor

The sorption rotary heat exchanger not only saves the heat, but also very efficiently controls the indoor humidity. The efficiency of humidity recovery and dehumidification can reach up to 90 %.



### Energy recovery with plate heat exchanger

Enthalpy plate heat exchanger efficiently controls humidity and operates without freezing in low temperature (up to -15 °C).

### Smart multi-level frost prevention

For units with plate heat exchangers indented for operation in a cold climate zone, multi-damper anti-frost prevention system is recommended. This system saves up to 20 % of thermal energy.



Smart multi-level frost prevention



### Compact modular design

VERSO 10–70 units has frameless design, which reduces thermal bridges and thermal loss.

Compact size of each section in VERSO 10–70 units allows bringing it through a standard 900 mm width door opening.



# Integrated control system C5



This is professional range automatic control system. It controls thermodynamical processes and saves the energy. User can get detailed information about unit operation. A variety of modes and functions allows the user to choose the optimal operating mode that maximizes energy saving. Fully "Plug and Play" solution factory assembled and prewired.



## Detailed information for the user

- Air flow indication ( $\text{m}^3/\text{h}$ ,  $\text{m}^3/\text{s}$ ,  $\text{l/s}$ )
- Thermal efficiency of the heat exchanger (%)
- Heat exchanger energy recovery (kW)
- Thermal energy savings indicator (%)
- Air heater energy consumption (kWh)
- Heat exchanger recovered energy counter (kWh)
- Fan's energy consumption (kWh)
- SFP factor of the fans with PM motors
- Clogging level of filters (%)



Panel C5.1

## Various operating modes

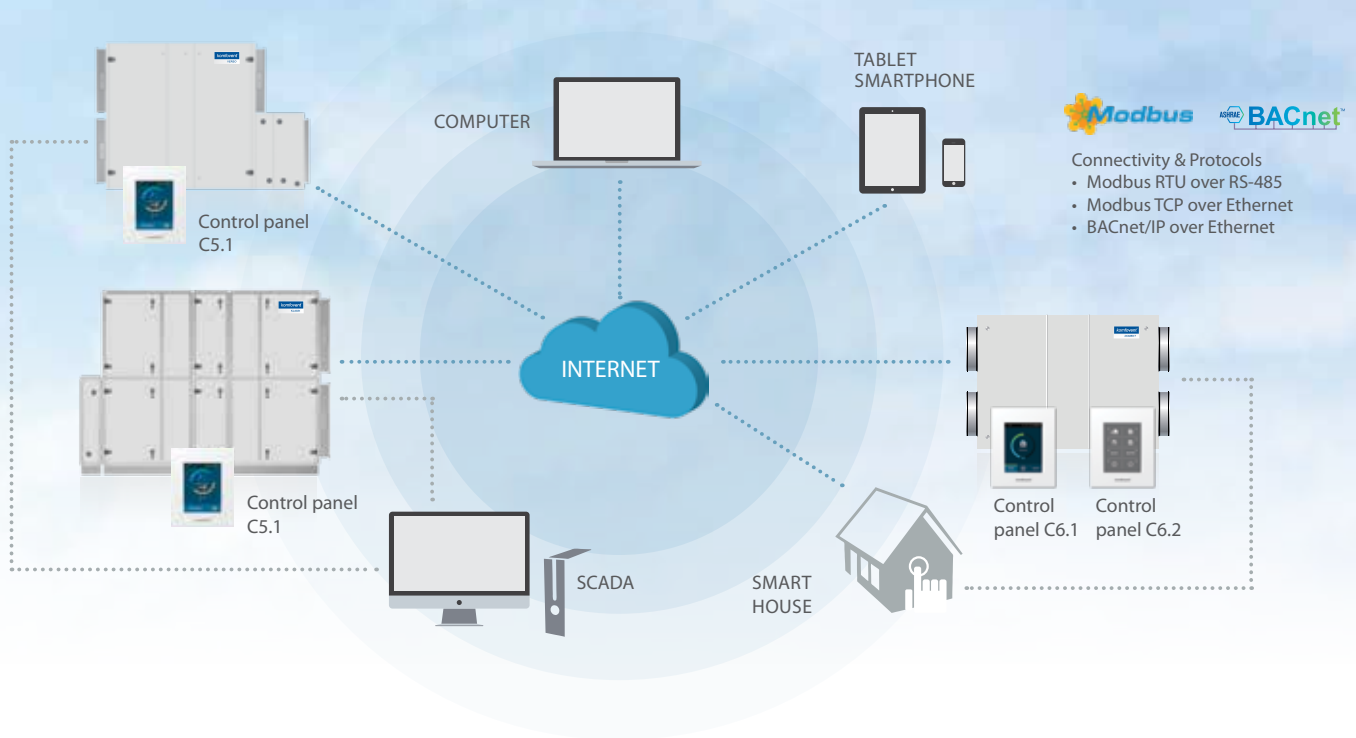
- 5 different operation modes
- 4 temperature control modes
- CAV, VAV, DCV flow control modes
- Universal operating schedule with up to 20 events
- Holiday scheduling

## Extended control possibilities

- Controlling up to 30 units from one panel
- Control via a standard Internet browser
- Control by Smartphone
- Ability to control by different external devices
- Control via BMS

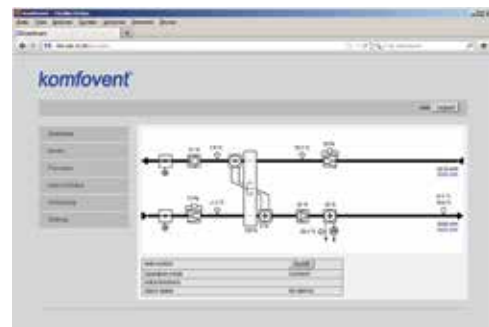
# Connectivity

KOMFOVENT air handling units are easily integrated with any desired Building Management Systems.



## Integrated WEB server

It allows you to monitor and manage the unit performance via a web browser. The performance parameters presented in real-time allow to control energy consumption and to choose the optimal mode.



## Unit's operation analysis

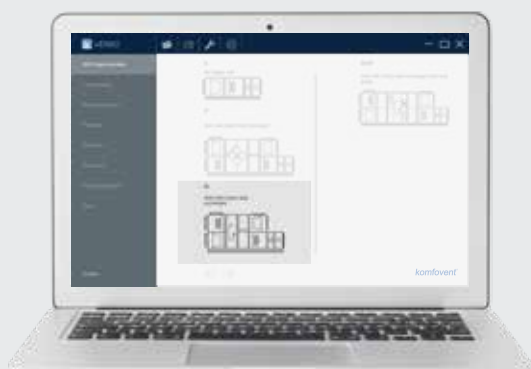
The computer program "Komfovent LogPlotter" has been designed to analyze the unit's operation history of the last 7 days. Unit's operation with C5 can be monitored not only in real-time from now on. The program can be downloaded from [www.komfovent.com](http://www.komfovent.com).



# Professional and convenient selection with Eurovent certified software



- Simple and intuitive selection program generates digital models of equipment for the REVIT design program.
- Accurate and detailed information. The report contains all details according to Eurovent, RLT and Ecodesign requirements.
- The program is constantly updated and enhanced with the new features.



- 1 Select the type of unit.
- 2 Choose the group VERSO Standard or project oriented VERSO Pro units.
- 3 Technical data sheets present important technical parameters at a specified working point of the selected unit: efficiency, SFP, acoustics and other projects' required data.

## KOMFOVENT HUB – digital drawings library for Revit users

Digital drawings of VERSO Standard units can be imported to REVIT using KOMFOVENT HUB library or by downloading the drawing from the KOMFOVENT webpage.

VERSO Pro units' drawings are generated in VERSO selection software.



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