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Control system Komfovent C5

Fully integrated control system KOMFOVENT ensures safe operation of the air handling unit, controls preset ventilation system parameters and optimizes unit's operating costs.

Detailed information for the user
- Air flow indication in (m^3/h, m^3/s, l/s).
- Thermal efficiency of the heat exchanger (%).
- Heat exchanger recovered energy (kW).
- Thermal energy saving indicator (%).
- Operation time counters of fans (h).
- Heater energy consumption counter (kW/h).
- Heat exchanger recovered energy counter (kW/h).

Various operating modes
- 5 different operation modes: *Comfort1*, *Comfort2*, *Economy1*, *Economy2* and *Special*. User may set supply and extract air volumes as well as air temperature for each of mode separately.
- Temperature control modes: Supply air / Extract air / Room. Possibility to select which temperature to be maintained.
- Flow control modes: Constant Air Volume (CAV), Variable Air Volume (VAV), Direct controlled volume (DCV).
- Universal operating schedule with up to 20 events, for which of them user can assign weekday(s) and one of five operation modes.
- Holliday scheduling allows the user to change operation mode or switch off the air handing unit at some dates of the year. Up to 10 events are possible.

Extended control possibilities
- Controlling up to 30 units connected into a network from one panel.
- Ability to connect the controller to the Internet network and manage it via a standard internet browser without any accessories.
- Ability to control the unit not only by a control panel or a computer, but also by different external devices (switch, timer, etc.) and systems (e.g. the smart house system).
- Possibility to control air handling unit by Smartphone.

Android iOS

Connectivity & Protocols
- Modbus RTU over RS-485
- Modbus TCP over Ethernet
- BACnet/IP over Ethernet

C3 control system features are available on **www.komfovent.com/resources.**

Komfovent VERSO added values

VERSO units are user-friendly and intended for convenient exploitation and efficient operation.

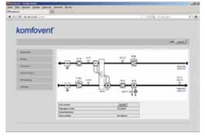
Easy selection

Equipment is selected using an informative and useful software, available to be downloaded to your PC from our website: **www.komfovent.com/software.** Technical data sheets present important technical parameters at a specified working point of the selected unit: efficiency, SFP, acoustics and other required data.

Integrated web server

VERSO air handling unit operation maybe monitored and controlled via web browser. Implemented Modbus and BACnet protocols allow easy integration of air handling units to any desired Building Management Systems.

Modbus BACnet



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/software.**

KOMFOVENT producer:
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2017

komfovent®

Non residential ventilation units **VERSO**

Verso R	Verso P	Verso CF	Verso S
units with rotary heat exchanger	units with plate heat exchanger	units with counterflow plate heat exchanger	supply air units

Komfovent VERSO

VERSO series consists of two groups: VERSO STANDARD is a standardized range of AHUs and VERSO PRO units are designed to conform particular professional projects. All units can be with a heat recovery or just air supply units.

Capacity range
from 1000 to 34 000 m^3/h

Features and benefits of VERSO units:
- All units are completely prewired and have an integrated automatic control.
- Innovative units with integrated reversible heating/cooling pump.
- Wide choice of control functions is already included as a standard feature.
- Extremely silent in operation.
- Low energy consumption.
- Energy efciency tested and approved by EUROVENT.
- Fans are balanced statically and dynamically to avoid vibration and ensure silent operation.
- All casings are powder painted.
- Steady baseframe with onsite regulation possibilities.
- Easy and quick assembling onsite.
- Integrated web server for clever control.
- Control via Smartphone available.

All standardized VERSO STANDARD units are based on the principle of Plug & Play: each unit has the integrated control system and is delivered with a complete automatic control installed and prewired inside the unit. VERSO PRO units can be fast delivered as they are available on stock. The airfow ranges from 1 000 to 7 000 m^3/h.
VERSO PRO units have more wide and project oriented possibilities which customer can select using the selection software.

K3-17-02

VERSO STANDARD air handling units. Specifications

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UNIT SIZE		1200		1300			1400	1500	1600		1700	2000		2100	2300	2500	3000		3500	4000		4500	7000	UNIT SIZE
AHU type		Verso R	Verso R	Verso CF	Verso CF	Verso S	Verso R	Verso CF	Verso R	Verso P	Verso CF	Verso R	Verso R	Verso S	Verso CF	Verso R	Verso R	Verso S	Verso CF	Verso R	Verso S	Verso R	Verso R	**AHU type**
Heat exchanger type		rotary	rotary	counter cross-flow	counter cross-flow	supply air unit	rotary	counter cross-flow	rotary	plate	counter cross-flow	rotary	rotary	supply air unit	counter cross-flow	rotary	rotary	supply air unit	counter cross-flow	rotary	supply air unit	rotary	rotary	**Heat exchanger type**
AHU version		universal*	flat	universal*	flat	flat	universal*	flat	universal*	flat	universal*	universal*	flat	flat	universal*	universal*	universal*	flat	universal	universal*	flat	universal*	horizontal	**AHU version**
Nominal air flow	m^3/h	1300	1200	1300	1300	1200	1500	1500	1800	1700	1700	2000	2000	2000	2300	2500	3600	3000	3500	3900	3700	4500	8000	m^3/h	**Nominal air flow**
Efficiency of heat exchanger**	%	84	80	79	79	–	84	79	82	66	78	81	83	–	81	79	81	–	81	80	–	79	80	%	**Efficiency of heat exchanger****
Dimensions	B, mm	905	1050	910	1100	700	905	1100	910	1350	910	910	1210	1000	910	910	1150	1075	1150	1150	1075	1150	1500	B, mm	**Dimensions**
	H, mm	905	480	905	527	350	905	527	1000	528	905	1000	526	350	905	1000	1150	555	1150	1150	555	1150	1520	H, mm	
	L, mm	1355	1360	1810	1650	893	1355	1650	1485	1560	1810	1485	2060	893	2000	1485	650/700/750	1160	750/1000/750	650/700/750	1160	650/700/750	750/390/750	L, mm	
Unit weight	kg	195	120	269	162	46	195	162	270	190	270	285	280	73	250	285	440 (135/160/145)	125	510 (145/190/175)	450 (140/160/150)	125	450 (140/160/150)	780 (270/230/280)	kg	**Unit weight**
Duct connections	mm	∅ 315 (4×)	∅ 315 (4×)	∅ 315 (4×)	∅ 315 (4×)	∅ 250 (2×)	∅ 315 (4×)	∅ 315 (4×)	300×400 (4×)	∅ 315 (4×)	∅ 315 (4×)	300×400 (4×)	∅ 355 (4×)	700×250 (2×)	300×400 (4×)	300×400 (4×)	400×500 (4×)	600×400 (2×)	400×500 (4×)	400×500 (4×)	600×400 (2×)	400×500 (4×)	1200×600 (4×)	mm	**Duct connections**
Max. operating current with electric air heater	A	13,2	11	10,8	10,8	10,6 / 15,4 / 24,1	13,2	13,2	13,2	17,5	13,2	15,3	17,1	25 / 35,9	17,1	17,1	16,7	–	–	25,6	–	27,4	–	A	**Max. operating current with electric air heater**
Max. operating current with water air heater	A	7,2	7,2	4,8	4,8	2,9	7,2	7,2	7,2	7,2	7,2	5	6,8	3,8	6,8	6,8	4,2	2,7	4,2	4,4	2,7	6,2	12,8	A	**Max. operating current with water air heater**
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	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	V/Hz	**Supply voltage**
Fans type		EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC		**Fans type**
Electric power input of the fan drive at maximum flow rate	W	470	470	273	273	273	470	470	470	470	470	500	660	2×170	660	660	1000	1000	1000	1000	1000	1700	2730	W	**Electric power input of the fan drive at maximum flow rate**
Heater type: E – electric, W – water or HCW – changeover coils		E/HCW	E/W	E/HCW	E/W	E/W	E/HCW	E/W	E/HCW	E/W	E/HCW	E/HCW	E/W	E/W	E/HCW	E/HCW	E/HCW	W	W	E/HCW	W	E/HCW	W		**Heater type: E – electric, W – water or HCW – changeover coils**
Maximal electric heater capacity	kW	4,5	3	4,5	4,5	6 / 9 / 15	4,5	4,5	4,5	7,5	4,5	7,5	7,5	15 / 22,5	7,5	7,5	9	–	–	15	–	15	–	kW	**Maximal electric heater capacity**
Control panel type		C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C3.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1	C5.1		**Control panel type**

Ordering key: **Verso** **X** **X** **X**

- **Series name**
- **Heat exchanger:**
  - **R** – rotary
  - **P** – plate
  - **CF** – counterflow plate heat exchanger
  - **S** – supply air unit
- **Unit size**
- **Version:**
  - **H** – horizontal
  - **V** – vertical
  - **F** – flat
  - **U** – universal

- Thermal insulation thickness – 50 mm.
- Standard filter class (supply/exhaust) – M5, F7 class air filters – on request.

* R 1200 UH, CF 1300 UH, R 1400 UH, R 1600 UH, CF 1700 UH, R 2000 UH, CF 2300 UH, R 2500 UH, R 3000 UH, R 4000 UH, R 4500 UH data

** Wave height – XL.