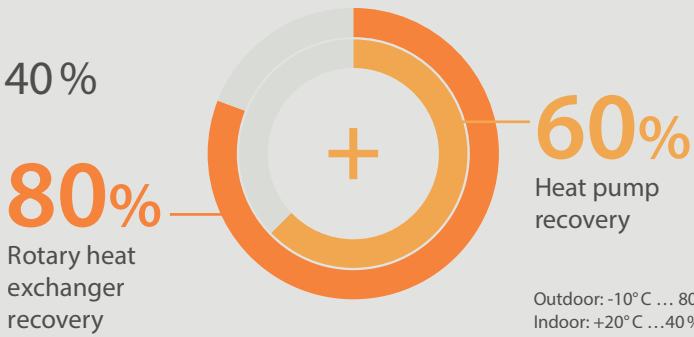


HVAC systems in one unit



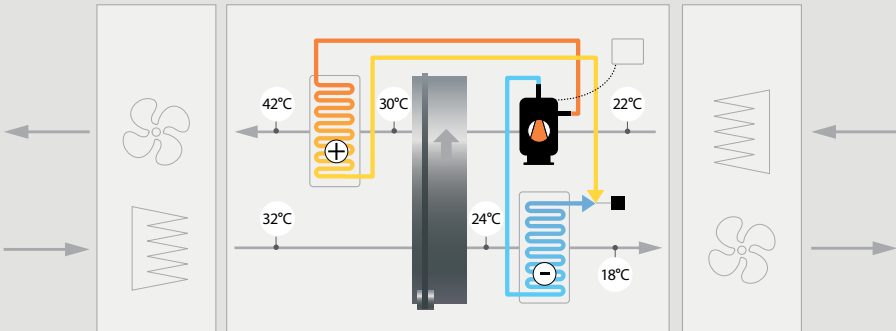
Thermal efficiency over 140 %

- To reach the maximum efficiency KOMFOVENT RHP units are designed to recover the energy in two steps:
- 1st step recovery by enthalpy rotary heat exchanger
 - 2nd step recovery by reversible heat pump

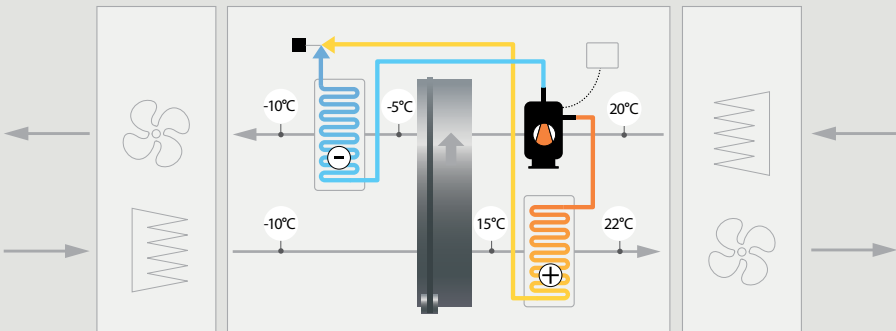


Optimised and efficient operation principles

Cooling mode
Due to cooling recovery by rotary heat exchanger, air temperature after rotor is lower than outside air temperature. Condensation temperature in this case is lower, what results in reduced compressor electricity consumption comparing with outdoor condensing unit.



Heating mode
Highly efficient rotary heat exchanger is used for first stage heat recovery, recovering the biggest part of the heat of extracted air. For second stage heat recovery and supply air temperature control, heat pump is used.



Control system C5

Detailed information for the user

- Air flow indication (m³/h, m³/s, l/s)
- Thermal efficiency of the heat exchanger (%)
- Heat exchanger energy recovery (kW)
- Thermal energy saving indicator (%)
- Heat exchanger recovered energy counter (kWh)
- Air heater energy consumption* (kWh)
- Fans energy consumption* (kWh)
- SFP factor of the fans*
- Clogging level of filters* (%)

* Available in VERSO RHP units only

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 / Balance. Possibility to select which temperature to be maintained.
- Flow control modes: Constant Air Volume, Variable Air Volume or Directly Controlled Volume.
- 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 handling unit at some dates of the year. Up to 10 events are possible.

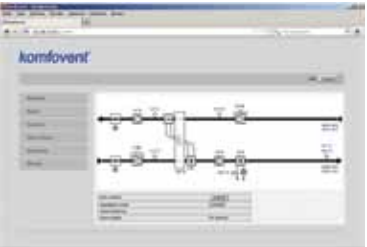
Extended control possibilities

- 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).



Integrated web server

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



Android application

Application software for Android smartphones or tablets is specially developed for more convenient control. User-friendly interface enables clear and easy monitoring of air handling unit operation. Scan the QR codes below and download mobile applications:



“Komfovent” application for units with integrated C5 control system.

Air handling units with HEAT PUMP



VENTILATION | HEATING | COOLING



VENTILATION



HEATING



COOLING

Innovative integrated heat pump solution for heating, cooling and ventilation in KOMFOVENT RHP

Why to choose KOMFOVENT RHP?



TOTAL COMFORT ALL YEAR LONG:
reversible heating and cooling operation of heat pump ensures comfort indoor climate



EXTREMELY ENERGY EFFICIENT AND RESOURCE SAVING:
two step efficiency is provided by rotary heat exchanger recovery and post heating / cooling operated by heat pump



ADDED VALUE TO INDOOR CLIMATE:
heating and humidity recovery in winter, cooling and dehumidifying in summer



“ALL INCLUSIVE” SOLUTION:
no need for condensing unit, chiller, piping or additional work providing



CONVENIENCE and SAFETY:
factory charged by refrigerant, no refrigeration knowledge is needed



ECO-FRIENDLY and PROTECTED:
R410A and R134A refrigerant and one circuit charge limits <10kg



FACTORY TESTED:
reliable and convenient PLUG & PLAY installation, commissioning and exploitation



INTELLIGENT CONTROL:
clever automatics control algorithms and reliable components ensure safe and efficient equipment operation



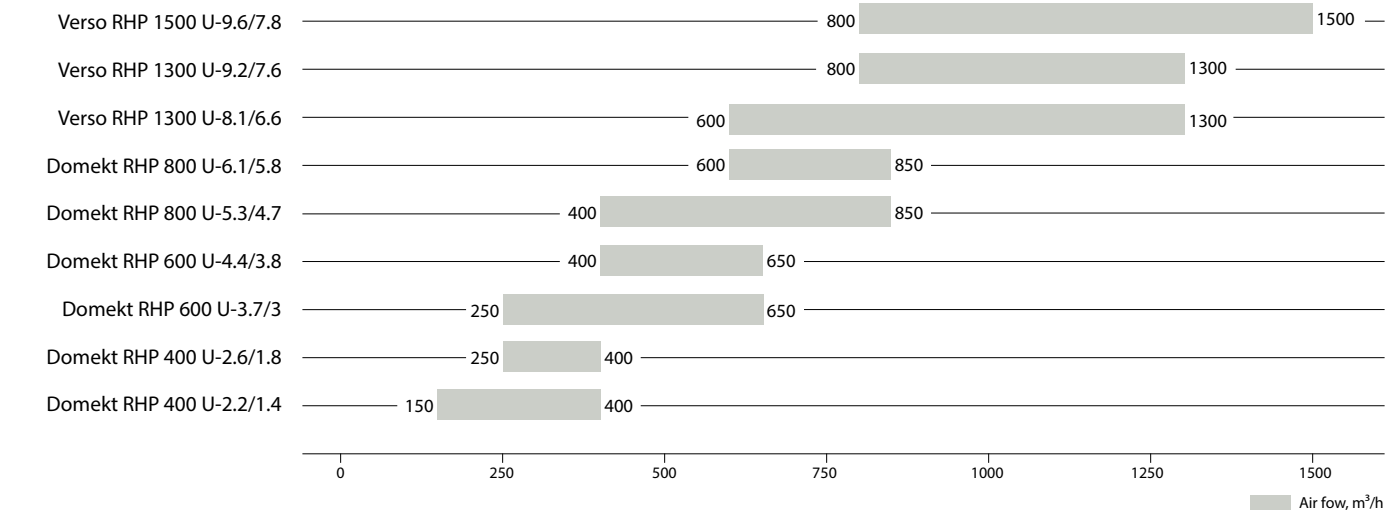
SEASONAL EFFICIENCY:
Verso RHP units are equipped with PM motor scroll and rotary compressors controlled by DC inverter driver allowing efficiency operation in part load conditions

Wide range of KOMFOVENT RHP application possibilities. Residential, public, commercial, industrial application solution

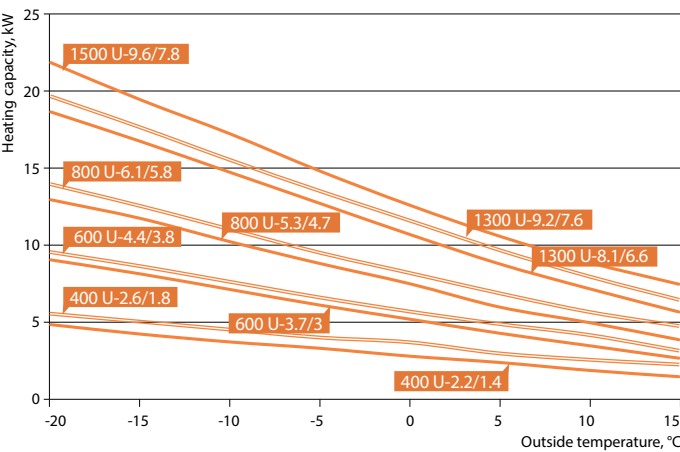
Komfovent RHP

for smaller area premises and required air flows from 150 m³/h to 1 500 m³/h

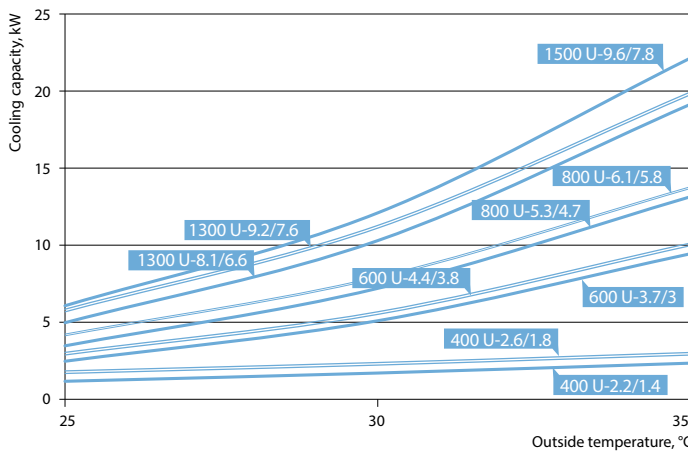
Air flow



Heating mode



Cooling mode

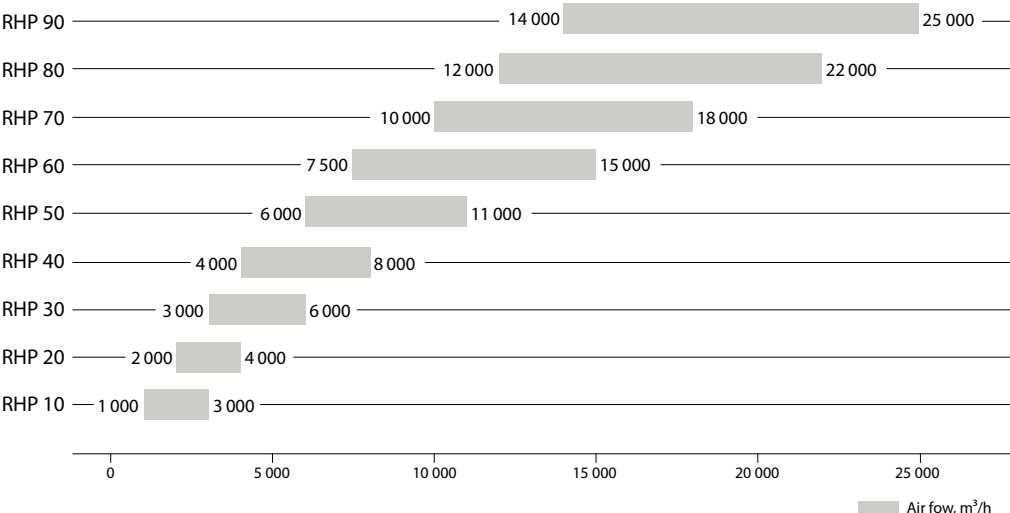


| Outdoor Indoor | | | Size | Domekt RHP 400 U | | Domekt RHP 600 U | | Domekt RHP 800 U | | Verso RHP 1300 U | | Verso RHP 1500 U | |
|----------------|----|----|---|------------------|------|------------------|------|------------------|------|------------------|------|------------------|--|
| | | | Nominal air flow, m³/h | 400 | | 650 | | 850 | | 1300 | | 1500 | |
| Heating mode | | | | | | | | | | | | | |
| T¹, °C | 7 | 20 | Total heating capacity, kW | 2,2 | 2,6 | 3,7 | 4,4 | 5,3 | 6,1 | 8,1 | 9,2 | 9,6 | |
| RH¹, % | 90 | 40 | Supply temperature, °C | 23 | 26 | 25 | 28 | 26 | 29 | 25,6 | 28 | 27,2 | |
| | | | Nominal compressor power absorption, kW | 0,18 | 0,42 | 0,34 | 0,52 | 0,49 | 0,73 | 0,36 | 1,04 | 1 | |
| | | | System COP²³, kW/kW | 9,6 | 5,5 | 9,5 | 7,7 | 9,8 | 7,8 | 10,9 | 8,4 | 9,1 | |
| | | | System SCOP²³⁴, Average climate | 13,4 | 7,2 | 13,3 | 9,7 | 12,7 | 9,4 | 12,9 | 9,6 | 10,6 | |
| | | | System SCOP²³⁴, Warm climate | 8,9 | 5,1 | 9,2 | 7,1 | 8,9 | 6,9 | 9,1 | 6,8 | 7,5 | |
| | | | System SCOP²³⁴, Cold climate | 16,8 | 8,6 | 16,2 | 11,3 | 15,2 | 11,1 | 15,4 | 11,5 | 12,8 | |
| Cooling mode | | | | | | | | | | | | | |
| T¹, °C | 35 | 27 | Total cooling capacity, kW | 1,4 | 1,8 | 3 | 3,8 | 4,7 | 5,8 | 6,6 | 7,6 | 7,8 | |
| RH¹, % | 40 | 50 | Supply temperature, °C | 20 | 19 | 20 | 19 | 19 | 17 | 22,5 | 21,7 | 20 | |
| | | | Nominal compressor power absorption, kW | 0,19 | 0,45 | 0,42 | 0,68 | 0,65 | 0,99 | 0,88 | 1,28 | 1,3 | |
| | | | System EER²³, kW/kW | 5,8 | 3,6 | 6,4 | 5,2 | 6,7 | 5,6 | 7,1 | 5,7 | 5,8 | |
| | | | System SEER²³⁴ | 4 | 3,45 | 4,52 | 4,7 | 4,65 | 4,6 | 4,65 | 4,62 | 3,9 | |

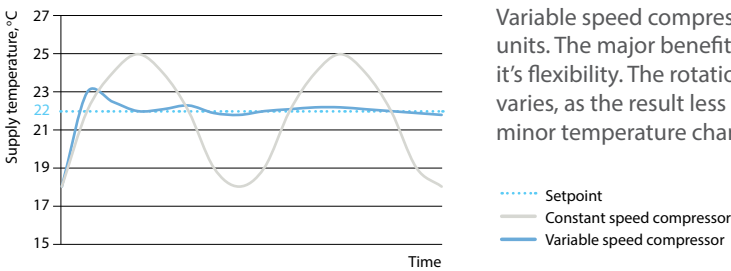
Komfovent RHP

for larger area premises and required air flows from 1 000 m³/h to 25 000 m³/h

Air flow



Device management schedule



Variable speed compressors are designed in VERSO units. The major benefit of this type of compressor is it's flexibility. The rotation speed of the compressor varies, as the result less energy is used and the minor temperature changes occur in the premises.

| Outdoor Indoor | | | Size | RHP 10 | RHP 20 | RHP 30 | RHP 40 | RHP 50 | RHP 60 | RHP 70 | RHP 80 | RHP 90 |
|----------------|----|----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | Max air flow, m³/h | 3000 | 4000 | 6000 | 8000 | 11000 | 15000 | 18000 | 22000 | 25000 |
| Heating mode | | | | | | | | | | | | |
| T¹, °C | -7 | 20 | Total heating capacity, kW | 18,5 | 24,0 | 36,0 | 48,0 | 65,0 | 90,0 | 110,0 | 130,0 | 145,0 |
| RH¹, % | 90 | 40 | Supply temperature, °C | 24,0 | | | | | | | | |
| | | | Nominal compressor power absorption, kW | 1,8 | 2,5 | 3,6 | 4,6 | 6,5 | 9,0 | 11,0 | 13,0 | 13,5 |
| | | | System COP²·³, kW/kW | 10,3 | 9,6 | 10,0 | 10,4 | 10,0 | 10,0 | 10,0 | 10,0 | 10,7 |
| | | | System temperature efficiency, % | 140,0 | | | | | | | | |
| Cooling mode | | | | | | | | | | | | |
| T¹, °C | 35 | 27 | Total cooling capacity, kW | 20,0 | 28,0 | 42,0 | 56,0 | 78,0 | 106,0 | 130,0 | 157,0 | 178,0 |
| RH¹, % | 40 | 50 | Supply temperature, °C | 20 | | | | | | | | |
| | | | Nominal compressor power absorption, kW | 3,2 | 4,4 | 6,8 | 8,5 | 11,5 | 15,2 | 18,5 | 23 | 24 |
| | | | System EER²·³, kW/kW | 6,3 | 6,4 | 6,2 | 6,6 | 6,8 | 7,0 | 7,0 | 6,8 | 7,4 |

¹ – Conditions according to EN14511

² – Rotary heat exchanger wave size "L"

³ – Rotary heat exchanger + heat pump

⁴ – According to EN 14825 standard

T – temperature, °C

RH – relative humidity, %