



COMFORT VENTILATION FOR MULTI-STOREY BUILDINGS

PUREST COMFORT



 **PICHLER**
systematic ventilation

www.pichlerluft.at



HIGHLY EFFICIENT VENTILATION SYSTEMS FOR MULTI-STOREY BUILDINGS

It is invisible, surrounds us every day, yet it is so important to our well-being - the air that we need to live. We spend approximately two-thirds of our time indoors. Healthy, fresh air at home and at work should be just as much a matter of course as clean drinking water. Comfortableness is highly dependent on air quality. That is exactly where our ventilation systems apply, because the right mix of temperature, air humidity, fresh air and cleanliness means that you will feel really good.

One area where we focus our work is multi-storey buildings. We were the first provider to receive certification from the Passivhausinstitut Darmstadt for our large units for controlled ventilation and venting. Our range of products includes central systems with which multiple flats or offices can be supplied by a central ventilation unit, and decentralised systems with a separate compact device for each unit.

Our company's headquarters is in Klagenfurt am Wörthersee. In addition to production and the central warehouse, this location is the starting point for research projects and new development. It started as a small family-run business more than 50 years ago, but has continued to this day in the second and third generation.



Mag. Gernot Pichler
Managing Director of J. Pichler Gesellschaft m.b.H.

INNOVATIONS FROM AUSTRIA FOR THE PUREST COMFORT

- | Complete systems
- | Matched components
- | Centralised or decentralised
- | High energy efficiency

PICHLER AT A GLANCE

- | Founded in 1959
- | Headquarters in Klagenfurt
- | 5 branches in Austria and Southeast Europe
- | 170 employees at work for you each day
- | 30,000 certified articles in our range of products
- | Hundreds of quality tests each year in our laboratories
- | Everything as a sole source supplier for your purest comfort



COMPLETE SYSTEMS FOR MULTI-STOREY BUILDINGS

CENTRAL COMFORT VENTILATION

THE DIFFERENCE IS FOUND IN THE DETAILS

The high efficiency of our central systems is based on the new demand-based fan control via the VAV flap position in connection with the actuators of the Generation MP bus systems on the volume flow controllers. The high-efficiency air/air counterflow heat exchanger provides highly efficient heat recovery. Volume flow controllers provide demand-based air volume flow. Every zone, every room receives exactly the air volume flow that is needed to exchange the outdoor air and consumed return air. Optional expansion possibilities such as constant volume flow control, constant pressure control and our further developed, efficiency-optimised Pichler System Optimisation supplement the extensive basic functions of the compact ventilation units.

BENEFITS

- | The complete system is matched to central quality requirements
- | Central air treatment
- | Only one penetration through the building shell for an outdoor air and exhaust air line and a free choice of intake position



HEALTHY AND COSY LIVING CLIMATE

Our ventilation systems provide fresh, clean air quality without draughts.



ENERGY SAVING

Heat recovery through high-efficiency air/air counterflow heat exchanger.



INDIVIDUAL SETTING

The air volume flow can be set individually via the room control unit. User-friendly control units in the flats.



EASY INSTALLATION AND MAINTENANCE

Through the central location of main components and filters.





LIST OF COMPONENTS FOR A COMPLETE SYSTEM

| Central | Design |
|---|--|
| 1. Ventilations units LG 500 to LG 6000 | With energy-saving radial fans with the latest EC technology, counter-current heat exchanger with automatic 100% bypass |
| 2. Pichler System Optimisation | For demand-based fan control via MP bus adapter |
| 3. Room control unit | User-friendly, discrete control units |
| 4. Acoustic damper | Flat acoustic damper, redirect muffler with integrated, electronically variable volume flow controllers as compact units (pre-set) |
| 5. Air outlets for supply and extract air | In a great variety of colours and designs |
| 6. Risers or distribution lines | Round (vent or SAFE design), rectangular, fire barriers |
| 7. Distribution box | Also in acoustic dampened designs |
| 8. Distribution duct system made of plastic | Round, oval |
| 9. Air intake and discharge elements | Deflector and louver covers, air fountain, outside wall elements |
| 10. Planning support, start-up, maintenance | |



LG 500



MP bus adapter for Pichler System Optimisation



Wall outlet



Room control unit

See technical documents for details



CENTRAL COMFORT VENTILATION INNOVATION FROM PICHLER:

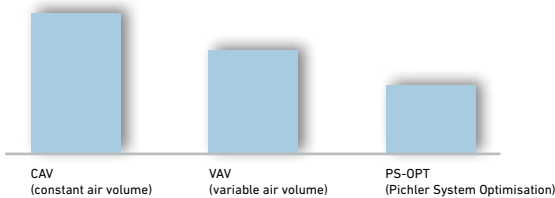
DEMAND-BASED FAN CONTROL BY MEANS OF PICHLER SYSTEM OPTIMISATION

With the newly developed Pichler System Optimisation, the supply and extract air fans are controlled demand-based in the central ventilation units. For energy-efficient and optimised system operation, up to 128 volume flow controllers can be addressed individually and controlled independently via the MP bus adapter.

The central management and control parameter of this demand-based system is the flap position of the volume flow controller. Here, the most widely open volume flow controller flap in the ventilation distribution line with a minimum amount of pressure loss is used as a reference parameter. The power consumption of the fans is reduced considerably. The lower sound emissions from the flap blades increase user comfort.

Today's standard inlet pressure regulation is no longer needed.

Energy consumption in system operation*



*The energy consumption may vary depending on the system and configuration.



Demand-based fan control
Pichler System Optimisation (PS-OPT)



SITUATION DEPENDENT VOLUME FLOW

Depending on the requirement from the residential units and setting of the operating levels V_{min} , V_{comf} or V_{max}

ENERGY SAVING

Considerably less energy consumption for the fans in the optimised system area with the Pichler System Optimiser

COST REDUCTION

Savings because there is no need for separate supply and extract air pressure control

ACOUSTICALLY OPTIMISED

Acoustic benefits through lower system inlet pressure in the air duct system

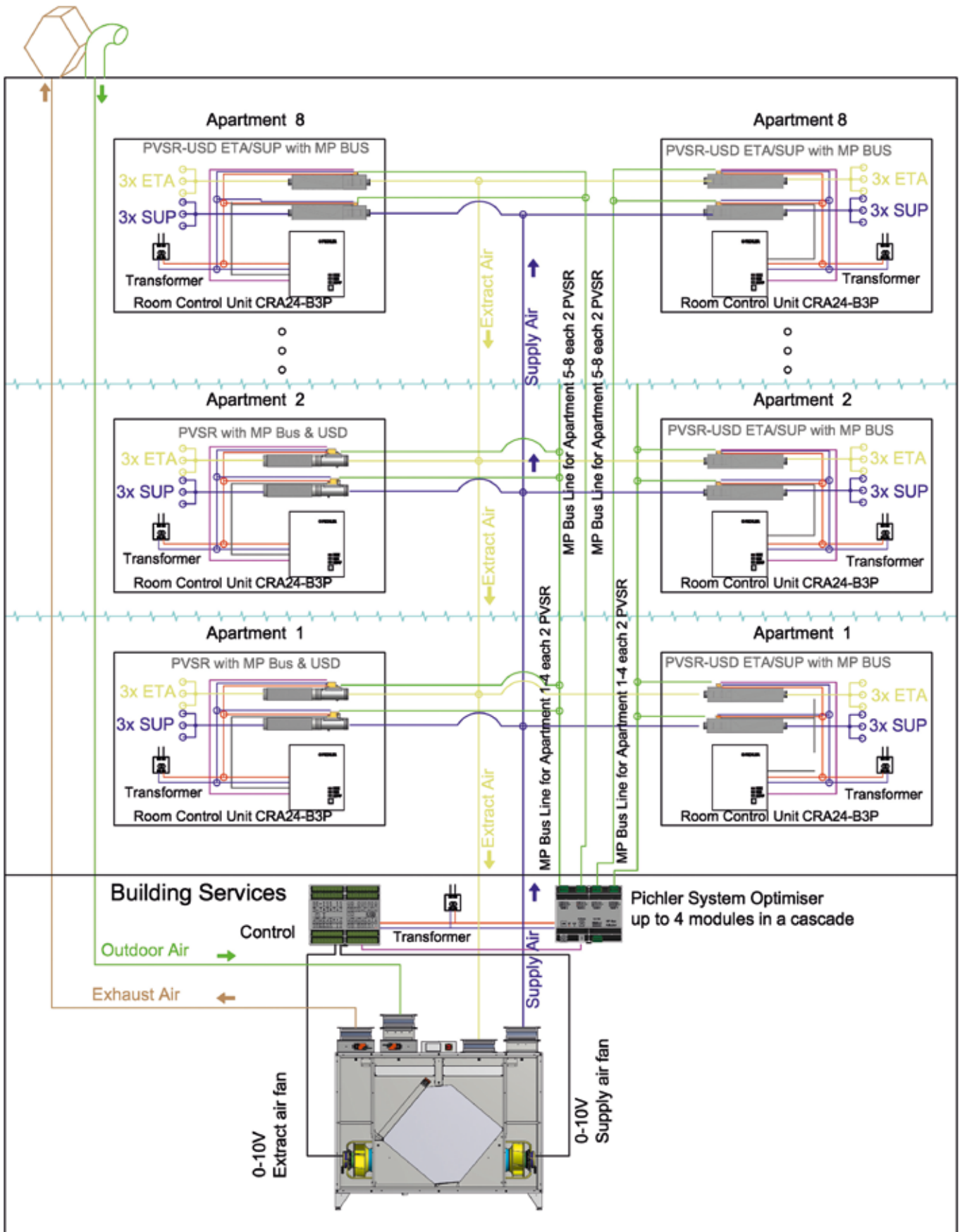
EASY INSTALLATION AND MAINTENANCE

Less work for the installation and wiring of the system due to MP bus communication

TIME SAVING

Quick start-up thanks to pre-configuration





System diagram for a multi-storey residential building with matched system components



SOFTWARE PICHLER SYSTEM OPTIMISATION (PS-OPT)

EFFICIENT START-UP THROUGH PRE-CONFIGURATION

By means of specialised software, the projected volume of air is pre-configured for the respective residential unit. Besides the volume of air, other parameters are pre-set for the volume flow controller such as, for example, V_{min} , V_{max} and V_{comf} . This pre-setting makes it easier to install and address the air volume flow controller. Each Pichler System Optimisation can access up to 4 x 8 (i.e. 32) volume flow controllers. Four system optimisation units can be connected in cascade. The PC software is used for recording the control characteristics. It makes a clear view of all relevant operating data possible as well as ongoing monitoring and analysis of the system operation and gives indications about any breakdowns of operations at a central location.

DEMAND-BASED VENTILATION

DEMAND-BASED VENTILATION

A combination of a room control unit with intelligent air quality sensors is a variation of demand-based ventilation with the Pichler System Optimisation. Through activation of CO₂, humidity and VOC control via the PC software, it is possible to implement individual comfort even better.

BENEFITS

- | The projected air volume is pre-configured for the respective residential unit
- | Pre-set parameters such as, for example, V_{min} , V_{max} and V_{comf} for the volume flow controller
- | Easier to install and address the air volume flow controller
- | Maximum configuration of up to 128 volume flow controllers
- | Recording of the control characteristics
- | Ongoing monitoring and analysis of system operation
- | Indications of possible breakdowns of operations at a central location
- | Combination of the room control unit with intelligent air quality sensors





DECENTRALISED COMFORT VENTILATION

MORE INDIVIDUAL COMFORT

Each residential or alternatively office unit is supplied using a separate ventilation unit. The conditioning of the outdoor air (filtering, pre-heating, ...) and removal of the extract air is carried out separately for each unit. The ventilation unit is installed inside the flat or office. In a wet area such as the bathroom or kitchen, the moist, used extract air is removed via the ventilation system and air passages supply the living areas with conditioned air. A high-efficiency air/air counterflow heat exchanger is also used here for heat recovery. That way, the energy and heating costs remain low while cosiness and living comfort increase noticeably.

BENEFITS

- | Easy volume flow control and exact volume flow balance
- | Low demands regarding planning
- | Short air lines and low pressure losses
- | Space-saving in common areas



HEALTHY AND COSY LIVING CLIMATE

Our ventilation systems provide fresh, clean air quality without draughts.



ENERGY SAVING

Energy-saving radial fans with the latest EC technology. Heat recovery through high-efficiency air/air counterflow heat exchanger.



INDIVIDUAL PLANNING

Compact units are matched to individual quality requirements and customer wishes.



WELL INSULATED

Optimally designed ventilation systems from an acoustic perspective.



EASY INSTALLATION AND MAINTENANCE

Reduced amount of work due to short air lines.





LIST OF COMPONENTS FOR A COMPLETE SYSTEM

| Decentralised | Design |
|--|---|
| 1. Ventilations units LG 180 to LG 500 | With energy-saving radial fans with the latest EC technology, counter-current heat exchanger with automatic 100% bypass |
| 2. Air humidification unit as an option | Hygiene tested and certified automatic air humidification unit for optimum room air |
| 3. Room control unit | Mini/Comfort/Design |
| 4. Acoustic damping compact units for direct connection to the units | For ventilation units of the LG 180-500 series |
| 5. Various acoustic dampers | Redirect muffler, round acoustic dampers |
| 6. Air outlets for supply and extract air | In a great variety of colours and designs |
| 7. Risers or distribution lines | Round (vent or SAFE design), rectangular, fire barriers |
| 8. Distribution box | Also in acoustic dampened designs |
| 9. Distribution duct system made of plastic | Round, oval |
| 10. Air intake and discharge elements | Deflector and louver covers, air fountain, outside wall elements |
| 11. Planning support, start-up, maintenance | |



LG 180



Redirect muffler



Wall outlet







Control units



See technical documents for details



COMPACT UNITS FOR DECENTRALISED COMFORT VENTILATION





| Unit model | LG 500 | LG 1400 |
|--|---|---|
| |  |  |
| Number of flats up to max. 85 m ² of living area (per residential unit) | max. 5 flats | max. 12 flats |
| Setting range of air volume flow [m ³ /h] | 150 to 550 | 350 to 1500 |
| Air/air counterflow heat exchanger with bypass | ✓ | ✓ |
| Radial fans with EC motors | ✓ | ✓ |
| Filters | Outdoor air pocket filter, quality class F7 Extract air pocket filter, quality class G4 | Outdoor air cartridge filter, quality class F7 Extract air cartridge filter, quality class G4 |
| Pressure sensors or Pichler System Optimisation | ✓ | ✓ |
| Dimensions W x H x D [mm] | 915 x 835 x 655 | 1445 x 1265 x 775 |
| Air line connection W x H x D [mm] | ODA/EHA/SUP/ETA: Ø 200 each with double-fluted seal | 200 x 596 |
| Weight without accessories [kg] | ca. 75 | ca. 190 |
| Voltage / frequency | 230 V/50 Hz/16 A | 230 V/50 Hz/20 A (E-battery design: 400 V/50 Hz/25 A) |
| Type of installation | Free-standing or wall mounted | Free-standing installation |
| Construction | Compact construction | Compact construction |
| Installation | Inside and outside ¹ (with options) | Inside and outside ¹ (with options) |
| Configurations | <ul style="list-style-type: none"> • left, right • with and without integrated pre-heater battery • demand-based fan operation via air quality sensors (CO₂, humidity, VOC) | <ul style="list-style-type: none"> • left, right • with and without attached pre- or re-heater battery (hot water or electric) • side version • demand-based fan operation via air quality sensors (CO₂, humidity, VOC) • with attached cooling battery |
| Technical details |  |  |

Test results



| Passive house certified in accordance with PHI criteria |  |  |
|---|---|---|
| NON-RESIDENTIAL BUILDING | | |
| Application area | | 350 to 1100 m ³ /h for external pressure of 228 Pa |
| Housing seal tightness | | external leakage 0.39%, internal leakage 0.56% |
| Heat recovery efficiency | | $\eta_{HR,eff} = 83\%$ |
| Comfort criterion | | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ |
| Flow efficiency | | $\eta_{el} = 0.39 \text{ Wh/m}^3$ |
| RESIDENTIAL BUILDING | | |
| Application area | 280 to 448 m ³ /h | 350 to 1200 m ³ /h for external pressure of 198 Pa |
| Housing seal tightness | external leakage 0.6%, internal leakage 0.52% | external leakage 0.36%, internal leakage 0.52% |
| Heat recovery efficiency | $\eta_{HR,eff} = 82\%$ (345 m ³ /h); 86% (277 m ³ /h) | $\eta_{HR,eff} = 82\%$ |
| Comfort criterion | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ |
| Flow efficiency | $\eta_{el} = 0.33 \text{ Wh/m}^3$ (345 m ³ /h); 0.26 Wh/m ³ (277 m ³ /h) | $\eta_{el} = 0.38 \text{ Wh/m}^3$ |
| Certified in accordance with EN 13141-7:2010 | | |
| Thermodynamic tests, volume flow rates ² | extract air side = 76%/76%/70% and supply air side = 88%/84%/82% (for 121/304/446 [m ³ /h]) | extract air side = 77%/76%/74% and supply air side = 89%/83%/84% (for 344/922/1306 [m ³ /h]) |
| Flow efficiency | $\eta_{el} = 0.26/0.20/0.36 \text{ Wh/m}^3$ | $\eta_{el} = 0.15/0.24/0.39 \text{ Wh/m}^3$ |

¹) Weatherproof design on request (weatherproof fan units are not passive house certified)

²) For ODA-Temp. +7°C: (+1 x Ref. +2°C), ETA-Temp. +20°C

| Unit model | LG 3200 | LG 6000 |
|--|--|--|
| |  |  |
| Number of flats up to max. 85 m ² of living area (per residential unit) | max. 26 flats | max. 45 flats |
| Setting range of air volume flow [m³/h] | 900 to 3400 | 1400 to 6200 |
| Air/air counterflow heat exchanger with bypass | ✓ | ✓ |
| Radial fans with EC motors | ✓ | ✓ |
| Filters | Outdoor air cartridge filter, quality class F7 Extract air cartridge filter, quality class G4 | Supply air, 2x compact filters, quality class F7 Extract air, 2x pocket filters, quality class G4 |
| Pressure sensors or Pichler System Optimisation | ✓ | ✓ |
| Dimensions W x H x D [mm] | 1445 x 1655 x 1000 | 2722 x 1722 x 1288 |
| Air line connection W x H x D [mm] | 300 x 800 | 550 x 1000 |
| Weight without accessories [kg] | ca. 390 | ca. 900 |
| Voltage / frequency | 400 V/50 Hz/20 A | 400 V/50 Hz/25 A |
| Type of installation | Free-standing installation | Free-standing installation |
| Construction | Compact construction | Modular Method of Construction |
| Installation | Inside and outside ¹⁾ (with options) | Inside and outside ¹⁾ (with options) |
| Configurations | <ul style="list-style-type: none"> • left, right • with and without pre- or re-heater battery (hot water or electric) • side version • demand-based fan operation via air quality sensors (CO₂, humidity, VOC) • with attached cooling battery | <ul style="list-style-type: none"> • left, right • with and without integrated water pre-heater or re-heater battery |
| Technical details |  |  |


Test results

| Passive house certified in accordance with PHI criteria |  |  |
|---|--|--|
| NON-RESIDENTIAL BUILDING | | |
| Application area | 950 to 1800 m ³ /h for external pressure of 259 Pa | 1700 to 3200 m ³ /h for external pressure of 294 Pa |
| Housing seal tightness | external leakage 0.3%, internal leakage 0.9% | |
| Heat recovery efficiency | $\eta_{HR, eff} = 84\%$ | $\eta_{HR, eff} = 84\%$ |
| Comfort criterion | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ |
| Flow efficiency | $\eta_{el} = 0.41 \text{ Wh/m}^3$ | $\eta_{el} = 0.45 \text{ Wh/m}^3$ |
| RESIDENTIAL BUILDING | | |
| Application area | 950 to 2200 m ³ /h for external pressure of 236 Pa | 1700 to 3200 m ³ /h for external pressure of 275 Pa |
| Housing seal tightness | external leakage 0.3%, internal leakage 0.9% | |
| Heat recovery efficiency | $\eta_{HR, eff} = 82\%$ | $\eta_{HR, eff} = 82\%$ |
| Comfort criterion | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ |
| Flow efficiency | $\eta_{el} = 0.41 \text{ Wh/m}^3$ | $\eta_{el} = 0.45 \text{ Wh/m}^3$ |
| Certified in accordance with EN 13141-7:2010 | | |
| Thermodynamic tests | | |
| Volume flows²⁾ | extract air side = 76%/75%/70% and supply air side = 88%/87%/88% (for 908/2120/3075 [m ³ /h]) | |
| Flow efficiency | $\eta_{el} = 0.19/0.28/0.45 \text{ Wh/m}^3$ | |

¹⁾ Weatherproof design on request (weatherproof fan units are not passive house certified)


²⁾ For ODA-Temp. +7 °C: (+1 x Ref. +2 °C), ETA-Temp. +20 °C

MODULAR UNITS FOR DECENTRALISED COMFORT VENTILATION

| Unit model | R-LG 1000 | R-LG 2000 | R-LG 3000 | R-LG 4000 |
|---|---|-----------------------------------|-----------------------------------|-----------------------------------|
| |  | | | |
| Number of flats up to max. 85 m ² of living area (per residential unit) | max. 10 | max. 22 | max. 28 | max. 38 |
| Setting range of air volume flow [m ³ /h] | 300 to 1000 | 600 to 2000 | 900 to 3000 | 1200 to 4000 |
| Air/air counterflow heat exchanger with bypass | ✓ | ✓ | ✓ | ✓ |
| Radial fans with EC motors | ✓ | ✓ | ✓ | ✓ |
| Outdoor air cartridge filter, quality class F7; Extract air cartridge filter, quality class G4 | ✓ | ✓ | ✓ | ✓ |
| Pressure sensors or Pichler System Optimisation | ✓ | ✓ | ✓ | ✓ |
| Demand-based fan operation via air quality sensors (CO₂, humidity, VOC) | ✓ | ✓ | ✓ | ✓ |
| Dimensions, compact W x H x D [mm] | 2160 x 1380 x 710 | 2430 x 1500 x 1000 | 2430 x 1500 x 1250 | 2430 x 1500 x 1500 |
| Dimensions, split W x H x D [mm] | 2300 x 1380 x 710 | 2680 x 1500 x 1000 | 2680 x 1500 x 1250 | 2680 x 1500 x 1500 |
| Base frame optional [mm] (raised H) | 100 | 100 | 100 | 100 |
| Air line connection W x H x D [mm] | 610 x 520 | 860 x 550 | 1110 x 550 | 1360 x 550 |
| Voltage / frequency | 230 V/50 Hz/10 A | 400 V/50 Hz/10 A | 400 V/50 Hz/10 A | 400 V/50 Hz/10 A |
| Voltage / frequency E-battery design | 400 V/50 Hz/16 A | 400 V/50 Hz/32 A | 400 V/50 Hz/32 A | |
| Installation | Inside and outside (with options) | Inside and outside (with options) | Inside and outside (with options) | Inside and outside (with options) |
| Configurations | | | | |
| • left, right | ✓ | ✓ | ✓ | ✓ |
| • with and without integrated pre-heater battery (hot water or electric) | ✓ | ✓ | ✓ | ✓ ¹⁾ |
| • with and without integrated re-heater battery (hot water or electric) | ✓ | ✓ | ✓ | ✓ ¹⁾ |
| • with integrated cooling battery | ✓ | ✓ | ✓ | ✓ |



¹⁾ Only hot water design, no electric design







| Unit model | R-LG 6000 | R-LG 8000 | R-LG 10000 |
|---|---|---|---|
| |  | | |
| Number of flats up to max. 85 m ² of living area (per residential unit) | max. 45 | max. 60 | max. 70 |
| Setting range of air volume flow [m ³ /h] | 1400 to 6000 | 2400 to 8000 | 3000 to 10000 |
| Air/air counterflow heat exchanger with bypass | ✓ | ✓ | ✓ |
| Radial fans with EC motors | ✓ | ✓ | ✓ |
| Outdoor air cartridge filter, quality class F7; Extract air cartridge filter, quality class G4 | ✓ | ✓ | ✓ |
| Pressure sensors or Pichler System Optimisation | ✓ | ✓ | ✓ |
| Demand-based fan operation via air quality sensors (CO₂, humidity, VOC) | ✓ | ✓ | ✓ |
| Dimensions, compact W x H x D [mm] | | | |
| Dimensions, split W x H x D [mm] | 2725 x 1635 x 1225 (Unit design without battery) | 11300 x 2185 x 2480 (Design with a acoustic damper for the unit) | 12200 x 3000 x 2765 (Design with a acoustic damper for the unit) |
| Base frame optional [mm] (raised H) | 100 | 100 | 100 |
| Air line connection W x H x D [mm] | 1000 x 550 | 2340 x 910 | 2690 x 1020 |
| Voltage / frequency | 400 V/50 Hz/13 A | 400 V/50 Hz/13 A | 400 V/50 Hz/16 A |
| Voltage / frequency E-battery design | | | |
| Installation | Inside and outside (with options) | Inside and outside (with options) | Inside and outside (with options) |
| Configurations | | | |
| • left, right | ✓ | ✓ | ✓ |
| • with and without integrated pre-heater battery (hot water or electric) | ✓ ¹⁾ | ✓ ¹⁾ | ✓ ¹⁾ |
| • with and without integrated re-heater battery (hot water or electric) | ✓ ¹⁾ | ✓ ¹⁾ | ✓ ¹⁾ |
| • with integrated cooling battery | ✓ | ✓ | ✓ |






¹⁾ Only hot water design, no electric design

Subject to changes.

VENTILATION UNITS FOR DECENTRALISED COMFORT VENTILATION

| Unit model | LG 180 | LG 250 | LG 500 |
|--|--|---|---|
| |  |  |  |
| Living space [m ²] | Ca. 50 up to 150 | Ca. 80 up to 200 | Ca. 150 up to 400 |
| Setting range of air volume flow [m ³ /h] | 60 to 180 | 80 to 250 | 150 to 550 |
| Heat exchanger | Air/air counterflow heat exchanger with bypass | Air/air counterflow heat exchanger with bypass | Air/air counterflow heat exchanger with bypass |
| Fans | Radial fans with EC motors | Radial fans with EC motors | Radial fans with EC motors |
| Filters | Outdoor air cartridge filter, quality class F7; Extract air cartridge filter, quality class G4 | Outdoor air cartridge filter, quality class F7; Extract air cartridge filter, quality class G4 | Outdoor air pocket filter, quality class F7; Extract air pocket filter, quality class G4 |
| Mode of operation | Constant volume flow control | Constant volume flow control | Pressure sensors or Pichler System Optimisation |
| Dimensions W x H x D [mm] | 641 x 739 x 263 | 675 x 850 x 595 | 915 x 835 x 655 |
| Air line connection Ø [mm] | 4 x 125 | 4 x 160 | 4 x 200 |
| Weight without accessories [kg] | ca. 35 | ca. 60 | ca. 75 |
| Voltage / frequency | 230 V/50 Hz/10 A | 230 V/50 Hz/10 A | 230 V/50 Hz/16 A |
| Type of installation | Wall and ceiling mounting | Free-standing or wall mounted | Free-standing or wall mounted |
| Construction | Compact construction | Compact construction | Compact construction |
| Installation | Inside (with options) | Inside (with options) | Inside and outside ¹⁾ (with options) |
| Configurations | <ul style="list-style-type: none"> • left, right • with and without built-in electrical PTC pre-heater battery • with and without built-in electrical PTC re-heater battery | <ul style="list-style-type: none"> • left, right • with and without integrated pre-heater battery • demand-based fan operation via air quality sensors (CO₂, humidity, VOC) | <ul style="list-style-type: none"> • left, right • with and without integrated pre-heater battery • demand-based fan operation via air quality sensors (CO₂, humidity, VOC) |
| Technical details |  |  |  |

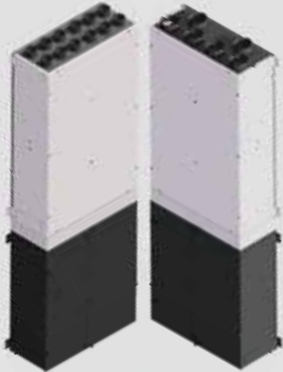

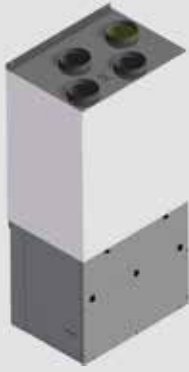


Test results

| Passive house certified in accordance with PHI criteria |  |  |  |
|--|---|---|---|
| Application area | 90 – 139 m ³ /h | 137 – 196 m ³ /h | 280 – 448 m ³ /h |
| Housing seal tightness | external leakage 0.14%, internal leakage 0.82% | external leakage 0.6%, internal leakage 1% | external leakage 0.6%, internal leakage 0.52% |
| Heat recovery efficiency | $\eta_{HR, eff} = 85\%$ | $\eta_{HR, eff} = 88\%$ | $\eta_{HR, eff} = 82\%$ (345 m ³ /h); 86% (277 m ³ /h) |
| Comfort criterion | $T_{SUP} = +16.8^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ | $T_{SUP} = +18.2^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ | $T_{SUP} = +16.5^{\circ}\text{C}$ for $T_{ODA} = -10^{\circ}\text{C}$ |
| Flow efficiency | $\eta_{el} = 0.4 \text{ Wh/m}^3$ | $\eta_{el} = 0.3 \text{ Wh/m}^3$ | $\eta_{el} = 0.33 \text{ Wh/m}^3$ (345 m ³ /h); 0.26 Wh/m^3 (277 m ³ /h) |
| Certified in accordance with EN 13141-7:2010 | | | |
| Thermodynamic tests, volume flow rates 121/304/446 [m ³ /h] ²⁾ | | | extract air side = 76%/76%/70% and supply air side = 88%/84%/82% |
| Flow efficiency | | | $\eta_{el} = 0.26/0.20/0.36 \text{ Wh/m}^3$ |

¹⁾ Weatherproof design on request (weatherproof fan units are not passive house certified)

²⁾ For ODA-Temp. +7°C: (+1 x Ref. +2°C), ETA-Temp. +20°C

OPTIONAL ACCESSORIES FOR DECENTRALISED COMFORT VENTILATION

| Unit model | LG 180 | LG 250 | LG 500 |
|---|---|--|--|
| Air quality sensors for demand-based system operation | ✓ | ✓ | ✓ |
| Max. connectible sensors | up to max. 4 | up to max. 4 | up to max. 10 |
| CO ₂ sensor module | ✓ | ✓ | ✓ |
| Humidity sensor module | ✓ | ✓ | ✓ |
| CO ₂ and humidity sensor module | ✓ | ✓ | ✓ |
| VOC sensor module | ✓ | ✓ | ✓ |
| Acoustic damping units | ✓ | ✓ | ✓ |
| with connecting pieces [mm] | 6 times Ø 100 or 12 times Ø 63 for KOMFLEX system | 4 times Ø 160 | 4 times Ø 200 |
| |  |  |  |
| Cover elements | ✓ | - | - |
| Height: 80 mm |  | - | - |
| Height: 285 mm |  | - | - |

Subject to changes.

PICHLER COMFORT SERVICE

CUSTOMER SERVICE

You can reach your PICHLER technical advisor at the service no.: +43 (0) 463-32769-0.

YOUR LOCAL PARTNER

Consulting, installation and start-up of PICHLER ventilation systems come from trained, technical installers.

PROMPT DELIVERY SERVICE

One of our strengths is the high availability of our extensive product range. Prompt service that is close to the customer means effective time savings for you.

MANUFACTURER'S GUARANTEE

Our extended manufacturer's guarantee creates additional reliability and means effective benefits for you.

SEMINARS FOR TECHNICAL PARTNERS

Training for energy-efficient, central and decentralised living space ventilation systems is available on request.

Information and registration at:

www.pichlerluft.at/messen-veranstaltungen-seminare.html



Pichler delivery service



Technical Service



REFERENCES

SYSTEMS FOR HOUSING COMPLEXES

- | Housing complex, Olympic Village, Innsbruck
- | Lodenareal housing complex
- | Korneuburg housing complex
- | Hollabrunn housing complex
- | Prinzersdorf housing complex
- | Tulln housing complex

HOTELS & EVENT BUSINESSES

- | Concert hall of the Vienna Boys' Choir, MuTh Vienna
- | Hotel Sacher, Vienna
- | Schönbrunn Zoo, Vienna
- | Museum District, Vienna
- | Casino Velden
- | Thermenland Congress Center, Loipersdorf
- | Hotel Slovenija I. Portorož, Slovenia
- | Seeparkhotel, Klagenfurt

SCHOOLS, EDUCATION CENTRES & RECREATION FACILITIES

- | St. Veit Secondary School
- | Klagenfurt Vocational School
- | University of Graz
- | Vienna Neustadt Military Academy
- | Khevenhüller Casern, Klagenfurt
- | Sports and recreation facility, Strallegg

OFFICES, BANKS & INSURANCE COMPANIES

- | DC Tower, Vienna
- | Telekom FG 20, Vienna
- | Office building, Dampfschiffstraße, Vienna
- | Vienna Municipal Regional Council of Graz
- | Planungsgruppe Viereck Bürobox, Graz
- | UniCredit Leasing Tower, Graz

RETAIL & GASTRONOMY

- | EKZ Seiersberg, Graz
- | EKZ Atrio, Villach
- | HOFER distribution centres and branch offices in Austria, Slovenia, Croatia
- | Interspar stores in Austria
- | IKEA, Graz and Klagenfurt
- | Rutar Center, Klagenfurt
- | Hypermarket Tuš, Kranj, Slovenia
- | GIGASPORT stores in Slovenia



Olympic Village, Innsbruck



Concert hall of the Vienna Boys' Choir





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