# STATIONARY
# HOT AIR HEATING SYSTEMS

***Stationary***
***hot air heating systems***

*Wall-mounted heaters*
*Universal heaters*
*Warm water heaters*
*Ceiling ventilation units*
*Ceiling heating systems*
*Ceiling fans*
*Exhaust gas systems*

***Quality with systems***

# RAPID HEAT ADAPTED TO YOUR NEEDS

**Hot air heating systems for air to feel good, surprisingly easy, but highly effective**

No matter whether they are used for workshops, production halls, showrooms, exhibition halls, sport centers, greenhouses: REMKO stationary hot air heating systems make sure people feel good.
We can guarantee the following:

- Immediate heat without preheating
- Fully automatic controls optional
- High operating safety in constant operation

**Immediate heat with hot air heating systems can be generated in fresh-air, mixed-air, and re-circulating air operation.**

**Fresh-air operation**

- The air to be heated is taken directly from the outside. In case of corresponding outside conditions, this method guarantees clean, unused air.
- Fresh air is brought into the room from outside (only ventilation, no heating) during fresh-air operation in the summer.

**Mixed-air operation**

- According to the setting, more or less fresh air is suctioned in together with the room air. This method reduces heating costs because previously heated air from the heated room is used on the one hand and covers the necessary fresh-air requirement on the other.

**Re-circulating air operation**

- The air is taken from the room being heated and blown into the same room again after heating. This method causes the lowest operating costs because only the previously heated room air is reheated and circulated.

**Low-noise REMKO warm water heaters for when hot water is the heating medium.**

Hot water as a heating medium is no problem with REMKO hot-water heating systems. Without great expense, the units can be quickly mounted to the wall or ceiling.

**Extensive accessory programme**

We offer tailor-made, complete solutions. For this purpose, we provide a specific needs-based assortment of accessory parts such as control units, exhaust gas systems, air discharge accessories, air intake accessories, ceiling fans, and many other products.

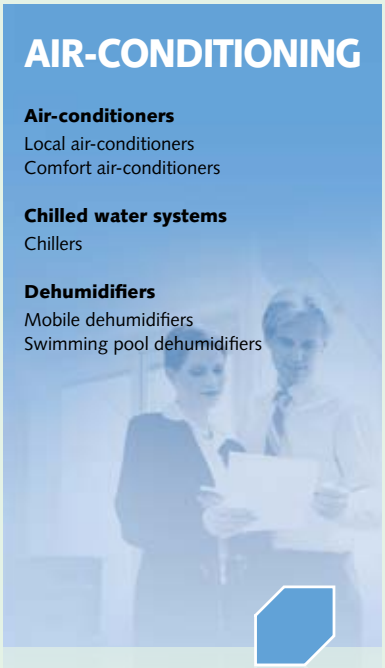
## *Quality with systems*

### AIR-CONDITIONING

**Air-conditioners**
Local air-conditioners
Comfort air-conditioners

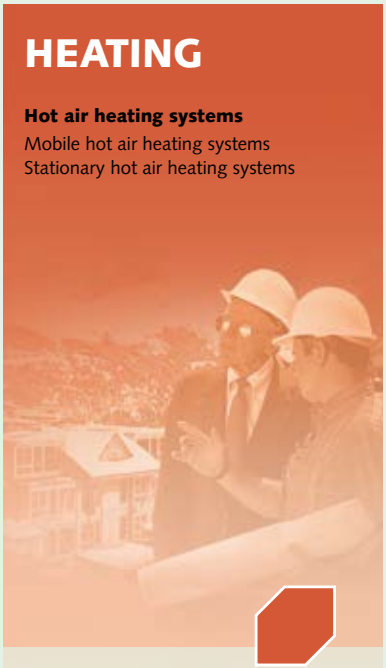
**Chilled water systems**
Chillers

**Dehumidifiers**
Mobile dehumidifiers
Swimming pool dehumidifiers



### HEATING

**Hot air heating systems**
Mobile hot air heating systems
Stationary hot air heating systems



### NEW ENERGIES

**Heat pump systems**
Heat pumps
Heat pump packages

**The REMKO product line offers the right unit for every demand.**

**For rooms in which the comfort of the people in it determines the solution**

- Sales rooms
- Exhibition halls
- Sports arenas

**For workrooms and storage areas**

- Production halls
- Warehouses
- Assembly systems
- Greenhouses

# *Product overview Stationary hot air heating systems*



*Edition: 2-2015*

# WALL-MOUNTED HEATING SYSTEMS

## *GPM series with modulating gas burner*


*REMKO GPM 75*

**REMKO GPM**

**Hall heating with high energy efficiency.**

This REMKO series is characterised by compact dimensions, flexible applications, and, in particular, microprocessor-controlled modulating gas burner technology. The heater is available in a total of five different sizes with a heating capacity from 11.8 to 71.5 kW. The units are suitable for both wall and ceiling mounting. A variety of exhaust gas and fresh air versions rounds out the flexible installation possibility of this series of units. Very high energy efficiency is achieved by using modulating gas burner technology.

The units automatically adapt their power output to suit demand. A high energy-saving potential results.

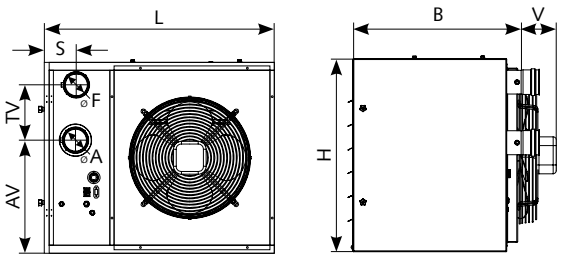

*REMKO GPM 25*

- High energy efficiency with modulating gas burner technology
- Very flexible application possibilities
- Space-saving mounting on the wall or ceiling
- Rapid, cost-effective installation
- Wide range of accessories available
- Very compact and noiseless unit design
- Combustion chamber in INOX steel

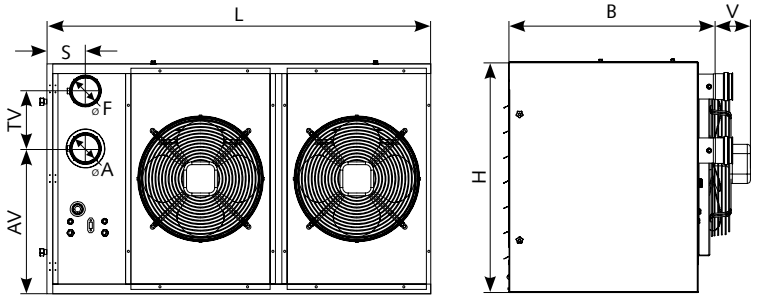
*High energy efficiency using modulating gas burner technology*

*Microprocessor-controlled technology*

**Dimensions – GPM 15/25/35**

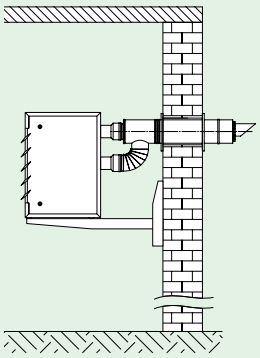



**Dimensions – GPM 55/75**




### Outside wall installation

Unit installation, including the exhaust gas and fresh air versions, takes place according to classifications C13, C33, C43, C53, C63, and B23 of DVGW-TRGI 2008. The gas connection must be performed by a licensed installer. Before the installation of the exhaust gas duct through the outside wall, the district heating inspector must be consulted.



**Exhaust gas duct through wall with burner fresh air supply**

### Dimensions – GPM 15-75

| Series | | L | B | H | V | A | F | AV | TV | S |
|---|---|---|---|---|---|---|---|---|---|---|
| GPM 15 | mm | 720 | 640 | 650 | 140 | 80 | 80 | 367 | 204 | 105 |
| GPM 25 | mm | 900 | 640 | 650 | 140 | 80 | 80 | 367 | 204 | 105 |
| GPM 35 | mm | 900 | 640 | 650 | 140 | 80 | 80 | 367 | 204 | 105 |
| GPM 55 | mm | 1240 | 640 | 740 | 140 | 80 | 80 | 457 | 204 | 105 |
| GPM 75 | mm | 1400 | 750 | 810 | 140 | 100 | 100 | 511 | 204 | 130 |

### Technical data

| Series | | GPM 15 | GPM 25 | GPM 35 | GPM 55 | GPM 75 |
|---|---|---|---|---|---|---|
| Rated heat load | kW | 12.5 – 16.5 | 20.0 – 26.5 | 24.0 – 34.8 | 40.0 – 58.0 | 58.0 – 78.0 |
| Rated heat capacity | kW | 11.8 – 15.1 | 18.8 – 24.4 | 22.6 – 31.5 | 37.6 – 53.0 | 54.5 – 71.5 |
| Air capacity | m³/h | 1,600 | 3,050 | 3,050 | 6,250 | 6,800 |
| Fuel | | Natural gas / propane gas | | | | |
| Gas flow rate – natural gas H | m³/h | 1.32 -1.75 | 2.12 – 2.80 | 2.54 – 3.68 | 4.23 – 6.14 | 6.14 – 8.25 |
| Gas flow rate – natural gas L | m³/h | 1.54 – 2.03 | 2.46 – 3.26 | 2.95 – 4.28 | 4.92 – 7.13 | 7.13 – 9.59 |
| Gas flow rate – propane gas | kg/h | 0.97 – 1.28 | 1.55 – 2.06 | 1.86 – 2.70 | 3.10 – 4.51 | 4.51 – 6.06 |
| Horizontal blowing range | m | 20 | 22 | 22 | 23 | 23 |
| Voltage supply | V/Hz | 230/1~/50 | 230/1~/50 | 230/1~/50 | 230/1~/50 | 230/1~/50 |
| Exhaust connection Ø | mm | 80 | 80 | 80 | 80 | 100 |
| Fresh air connection Ø | mm | 80 | 80 | 80 | 80 | 100 |
| Weight | kg | 59 | 65 | 69 | 97 | 150 |

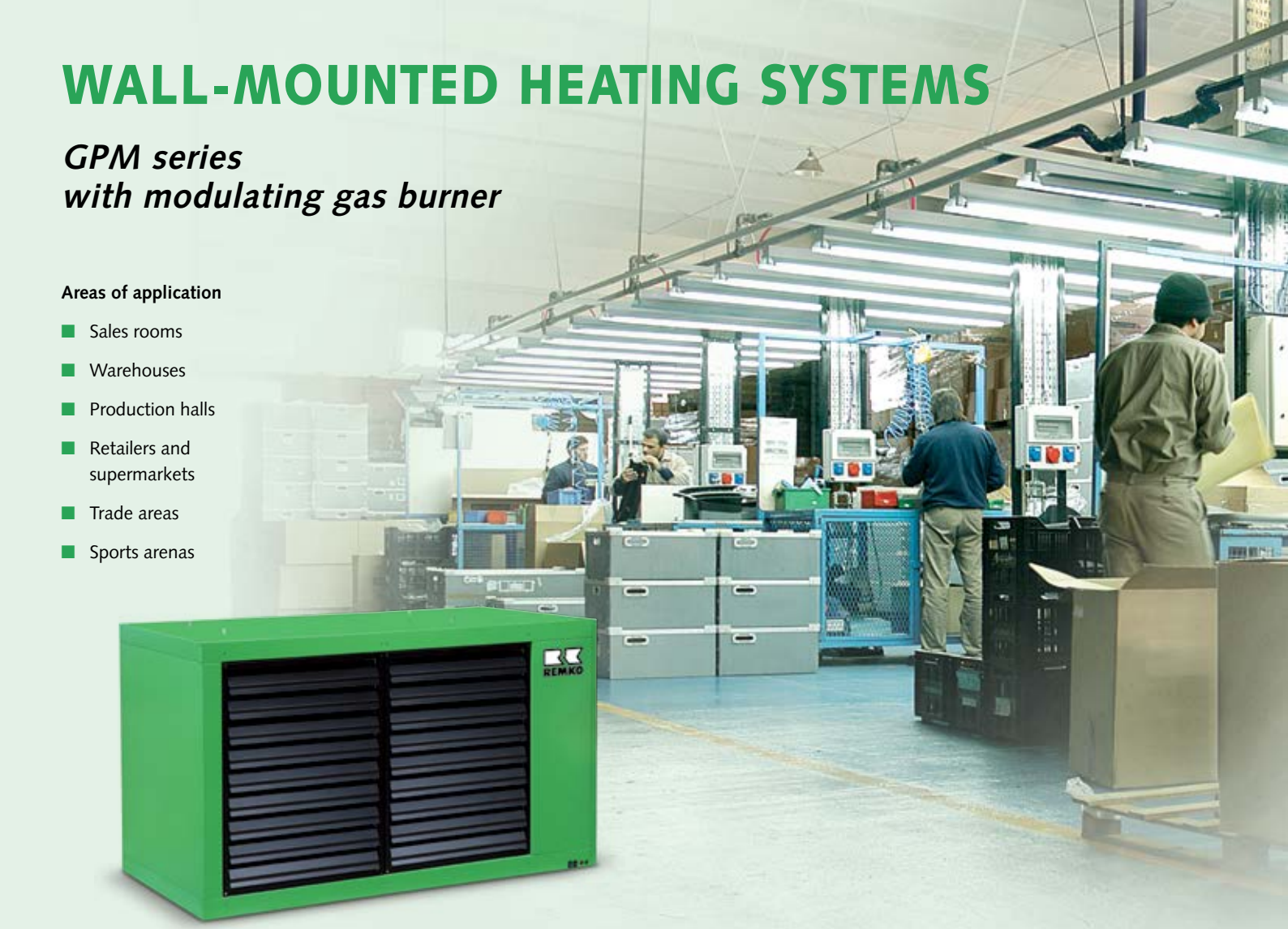
| | | | |
|---|---|---|---|
| Calorific value | $H_i$ related to dry standard test gas at 15°C and 1,013.25 mbar | | |
| Natural gas H | G 20 = 9.45 kWh/m³ | Liquid gas | G 30 = 12.68 kWh/kg |
| Natural gas L | G 25 = 8.13 kWh/m³ | Liquid gas | G 31 = 12.87 kWh/kg |

# WALL-MOUNTED HEATING SYSTEMS

## *GPM series with modulating gas burner*

**Areas of application**

- Sales rooms
- Warehouses
- Production halls
- Retailers and supermarkets
- Trade areas
- Sports arenas




**Technical data**

| Series * | | GPM 15 | GPM 25 | GPM 35 | GPM 55 | GPM 75 |
|---|---|---|---|---|---|---|
| Rated heat load | kW | 12.5 – 16.5 | 20.0 – 26.5 | 24.0 – 34.8 | 40.0 – 58.0 | 58.0 – 78.0 |
| Rated heat capacity | kW | 11.8 – 15.1 | 18.8 – 24.4 | 22.6 – 31.5 | 37.6 – 53.0 | 54.5 – 71.5 |
| Air capacity | m³/h | 1,600 | 3,050 | 3,050 | 6,250 | 6,800 |
| Design<br>Ref. no. | | **Natural gas H**<br>224400 | **Natural gas H**<br>224415 | **Natural gas H**<br>224430 | **Natural gas H**<br>224445 | **Natural gas H**<br>224460 |
| Design<br>Ref. no. | | **Natural gas L**<br>224401 | **Natural gas L**<br>224416 | **Natural gas L**<br>224431 | **Natural gas L**<br>224446 | **Natural gas L**<br>224461 |
| Design<br>Ref. no. | | **Propane gas**<br>224410 | **Propane gas**<br>224425 | **Propane gas**<br>224440 | **Propane gas**<br>224455 | **Propane gas**<br>224470 |
| * The gas connection must be performed by a licensed installer. | | | | | | |
| **Switchgear and control units** | | | | | | |
| Electronic temperature controller for 1 unit, **Type ATR-6**, surface installation, IP 30 protection class, automatic day/night economy, weekly programme, electrical remote control, error and operation messages | | 1011361 | 1011361 | 1011361 | 1011361 | 1011361 |
| Electronic temperature controller for 1-30 units (group switch), **Type ATR-6 G**, surface installation, protection class IP 54, automatic day/night economy, weekly programme, electrical remote control, external thermostat connection for mixed temperature, error and operation messages | | 1011363 | 1011363 | 1011363 | 1011363 | 1011363 |
| External temperature probe for **ATR-6 G** | | 1011364 | 1011364 | 1011364 | 1011364 | 1011364 |
| **Accessories** | | | | | | |
| Wall bracket<br>Design: Standard | | 228760 | 228760 | 228760 | 228760 | 228760 |
| Wall bracket<br>Design: Rotary | | 228761 | 228761 | 228761 | 228762 | 228763 |
| Mounting set for attachment to ceiling with horizontal air discharge, complete, **Type MDH 1** | | 228765 | 228765 | 228765 | 228765 | 228765 |
| Mounting set for attachment to ceiling with vertical air discharge, built-in, **Type MDV 1** | | 228766 | 228766 | 228766 | 228767 | 228767 |
| Gas connection tube made of stainless steel fabric, length 500 mm | | 228768 | 228768 | 228768 | 228768 | 228769 |

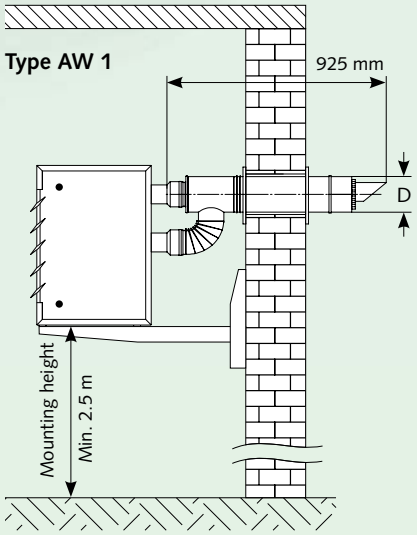


*Electronic temperature regulation,* ***Type ATR-6,*** *Ref. no. 1011361*

*Electronic temperature controller,* ***Type ATR-6 G,*** *Ref. no. 1011363*

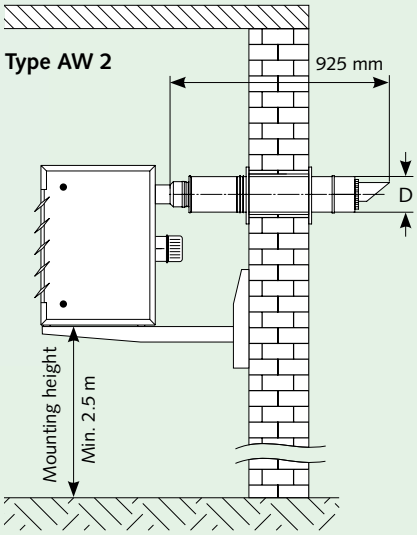
**LAS balanced flue system through the wall with burner fresh air supply**

**Type AW 1**




**Exhaust gas duct through wall**

**Type AW 2**




**Note**

Please observe the following pipe diameters during planning:

| Series | Pipe Ø D |
|---|---|
| GPM 15 | 125 mm |
| GPM 25 | 125 mm |
| GPM 35 | 125 mm |
| GPM 55 | 125 mm |
| GPM 75 | 150 mm |

For sample installations, see Type **AW 1** and **AW 2**

## Exhaust gas duct, outside wall

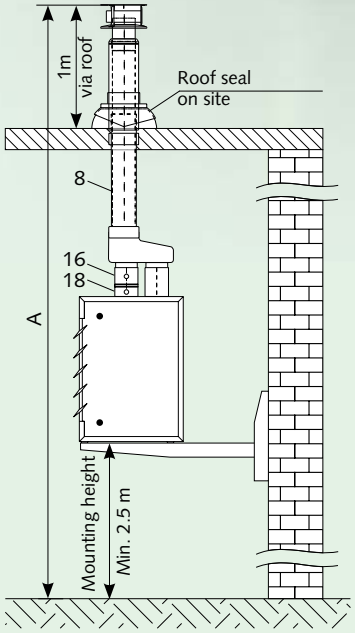
| Series | GPM 15 | GPM 25 | GPM 35 | GPM 55 | GPM 75 |
|---|---|---|---|---|---|
| LAS balanced flue system with integrated burner fresh air supply for exterior wall installation, incl. wind guard, 925 mm long, **Type AW 1** | 228770 | 228770 | 228770 | 228770 | 228771 |
| Exhaust gas pipe for exterior wall installation, incl. wind guard and protective grid for combustion air intake, 925 long, **Type AW 2** | 228772 | 228772 | 228772 | 228772 | 228773 |
| **Individual sections** | | | | | |
| Exhaust gas or fresh air pipe, length 250 mm | 228868 | 228868 | 228868 | 228868 | 228869 |
| Exhaust gas or fresh air pipe, length 500 mm | 228871 | 228871 | 228871 | 228871 | 228876 |
| Exhaust gas or fresh air pipe, length 1000 mm | 228872 | 228872 | 228872 | 228872 | 228877 |
| Exhaust or fresh air joint, 90° | 228910 | 228910 | 228910 | 228910 | 229010 |
| Exhaust or fresh air joint, 45° | 228909 | 228909 | 228909 | 228909 | 229009 |
| Exhaust gas pipe with condensate drain, horizontal, length 185 mm | 228955 | 228955 | 228955 | 228955 | 229055 |
| Protective grid for combustion air intake | 228960 | 228960 | 228960 | 228960 | 229060 |

CE certificate no. CE 0432-BPR-119933

# WALL-MOUNTED HEATING SYSTEMS

## *GPM series with modulating gas burner*

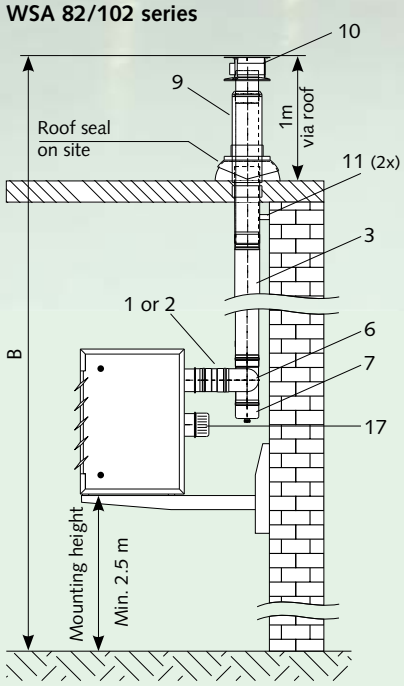
**LAS balanced flue system**
**WSA 81/101 series**




***LAS balanced flue system via roof with burner fresh air supply WSA 81/101 series, single-walled aluminium, complete***
****Consisting of:***

*Pos. 8* *1 unit roof penetration LAS system with burner, fresh air supply, incl. rain hood, overall length 1850 mm*
*Pos. 16* *1 exhaust gas pipe with condensate drain, vertical, length 185 mm*
*Pos. 18* *1 connection port with test nipple*

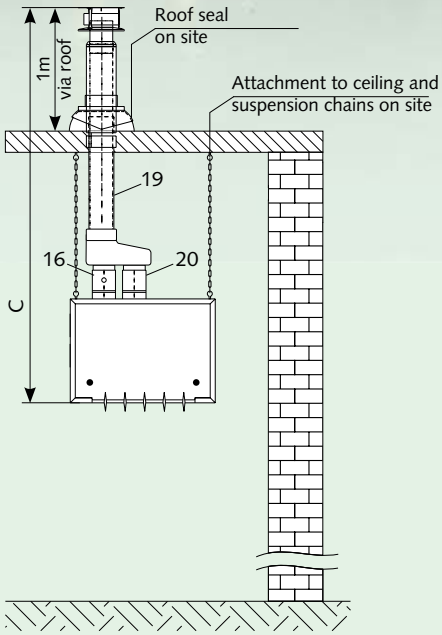
**Exhaust gas duct**
**WSA 82/102 series**




**Exhaust gas duct via roof WSA 82/102 series, single-walled aluminium, complete,**
***Consisting of:**

*Pos. 1* *1 exhaust gas or fresh air pipe, length 250 mm (for WSA 102)*
*Pos. 2* *1 exhaust gas or fresh air pipe, length 500 mm (for WSA 82)*
*Pos. 3* *1 exhaust gas or fresh air pipe, length 1000 mm*
*Pos. 6* *1 T-connection, 90°*
*Pos. 7* *1 cleaning component with condensate drain*
*Pos. 9* *1 roof penetration*
*Pos. 10* *1 rain hood*
*Pos. 11* *2 wall mounts*
*Pos. 17* *1 protective grid for combustion air intake*

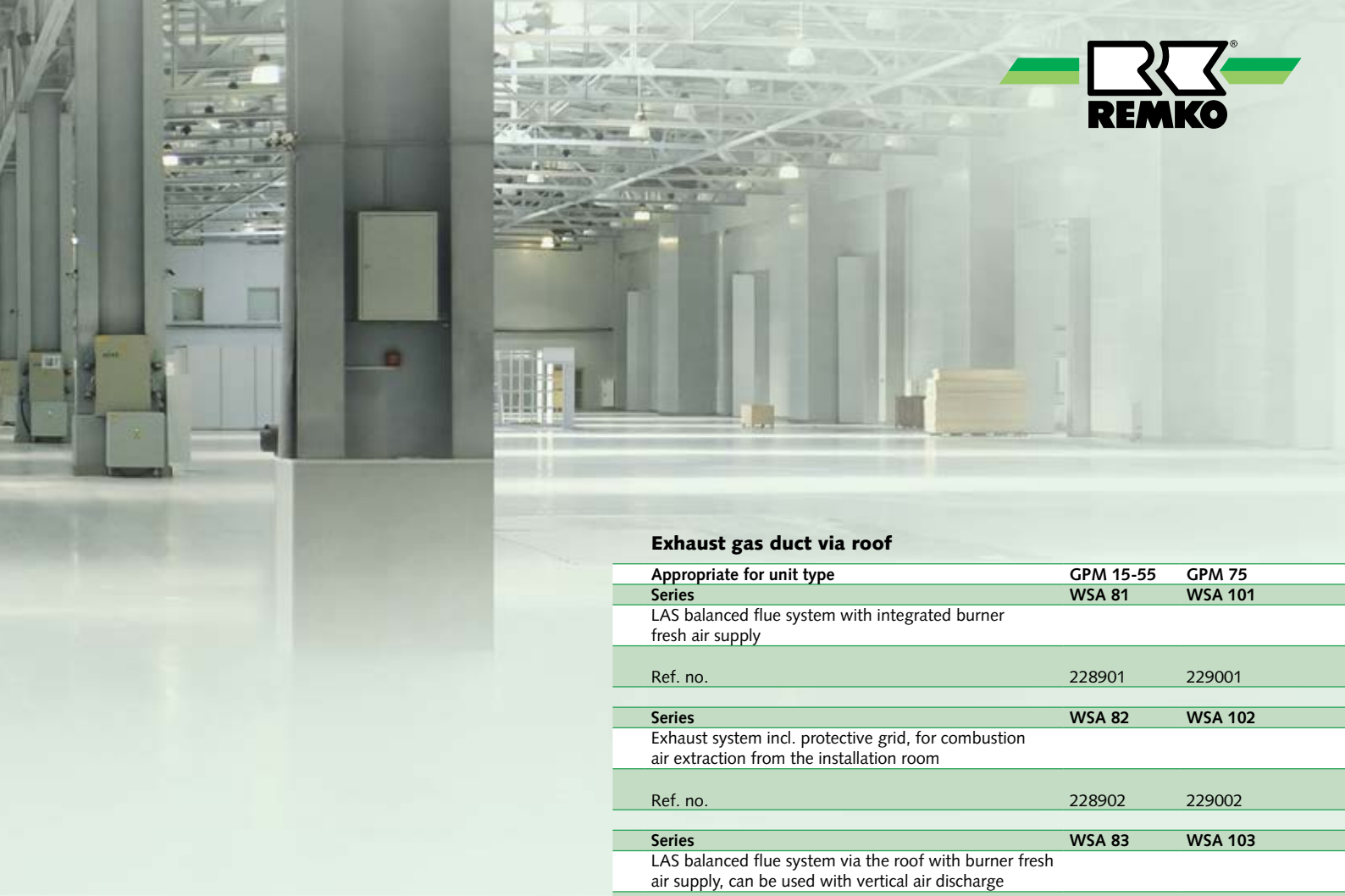
**LAS balanced flue system**
**WSA 83/103 series**




***LAS balanced flue system through the roof with burner fresh air supply, for use with vertical air discharge**, WSA 83/103 series, single-wall, aluminium , complete***
****Consisting of:***

*Pos. 19* *1 roof penetration, LAS system with burner fresh air supply, incl. rain cover, "vertical" design, overall length 1850 mm*
*Pos. 16* *1 exhaust gas pipe with condensate drain, vertical, length 185 mm*
*Pos. 20* *1 exhaust gas or fresh air pipe length 185 mm*

* *A slanted/flat roof penetration must be ordered as well if required.*
** *Order mounting set, Type MDV 1, for vertical air discharge as well.*



## Exhaust gas duct via roof

| | Appropriate for unit type | GPM 15-55 | GPM 75 |
|---|---|---|---|
| | **Series** | **WSA 81** | **WSA 101** |
| | LAS balanced flue system with integrated burner fresh air supply | | |
| | Ref. no. | 228901 | 229001 |
| | **Series** | **WSA 82** | **WSA 102** |
| | Exhaust system incl. protective grid, for combustion air extraction from the installation room | | |
| | Ref. no. | 228902 | 229002 |
| | **Series** | **WSA 83** | **WSA 103** |
| | LAS balanced flue system via the roof with burner fresh air supply, can be used with vertical air discharge | | |
| | Ref. no. | 228903 | 229003 |

* Pitched/flat roof penetration should also be ordered where required

| | Individual sections | Ref. no. | Ref. no. |
|---|---|---|---|
| 1 | Exhaust gas or fresh air pipe, length 250 mm | 228868 | 228869 |
| 2 | Exhaust gas or fresh air pipe, length 500 mm | 228871 | 228876 |
| 3 | Exhaust gas or fresh air pipe, length 1000 mm | 228872 | 228877 |
| 4 | Exhaust or fresh air joint, 90° | 228910 | 229010 |
| 5 | Exhaust or fresh air joint, 45° | 228909 | 229009 |
| 6 | T-connection, 90° | 228915 | 229015 |
| 7 | Cleaning component with condensate drain | 228920 | 229020 |
| 8 | LAS system roof penetration with burner fresh air supply, including rain hood, total length 1850 mm | 228965 | 229065 |
| 9 | Roof penetration, total length 1500 mm | 228930 | 229030 |
| 10 | Rain hood | 228935 | 229035 |
| 11 | Wall mount | 228940 | 229040 |
| 12 | Universal slanted roof penetration for WSA 82/102 | 228945 | 229045 |
| 13 | Flat roof penetration for WSA 82/102 | 228950 | 229050 |
| 14 | Universal pitched roof penetration for WSA 81/101 and WSA 83/103 | 228970 | 229070 |
| 15 | Flat roof penetration for WSA 81/101 and WSA 83/103 | 228975 | 229075 |
| 16 | Exhaust gas pipe with condensate drain, length 185 mm | 228955 | 229055 |
| 17 | Protective grid for combustion air intake | 228960 | 229060 |
| 18 | Connection ports with test nipple | 228980 | 229080 |
| 19 | Roof penetration, LAS system with burner fresh air supply, incl. rain hood, "vertical" design, total length 1850 mm | 228966 | 229066 |
| 20 | Exhaust gas or fresh air pipe, length 185 mm | 228967 | 229067 |

CE certificate no. CE 0432-BPR-119933

## Chimney height

| Series | A | B | C |
|---|---|---|---|
| GPM 15 | 5.15 | 5.65 | 2.65 |
| GPM 25 | 5.15 | 5.65 | 2.65 |
| GPM 35 | 5.15 | 5.65 | 2.65 |
| GPM 55 | 5.25 | 5.75 | 2.65 |
| GPM 75 | 5.30 | 5.80 | 2.80 |

Dimensions in meters

## Note

Please observe the following pipe diameters when planning the necessary roof penetrations.

| Series | Type | Pipe Ø |
|---|---|---|
| GPM 15 | WSA 81 | 125 mm |
| GPM 15 | WSA 82 | 95 mm |
| GPM 15 | WSA 83 | 125 mm |
| | | |
| GPM 25 | WSA 81 | 125 mm |
| GPM 25 | WSA 82 | 95 mm |
| GPM 25 | WSA 83 | 125 mm |
| | | |
| GPM 35 | WSA 81 | 125 mm |
| GPM 35 | WSA 82 | 95 mm |
| GPM 35 | WSA 83 | 125 mm |
| | | |
| GPM 55 | WSA 81 | 125 mm |
| GPM 55 | WSA 82 | 95 mm |
| GPM 55 | WSA 83 | 125 mm |
| | | |
| GPM 75 | WSA 101 | 150 mm |
| GPM 75 | WSA 102 | 115 mm |
| GPM 75 | WSA 103 | 150 mm |

# GAS/GROSS CALORIFIC VALUE HEATING SYSTEMS

## *GPC series with modulating gas burner in condensing design*


*REMKO GPC 75*

**Up to 105%**
**Efficiency**

### REMKO GPC

**Hall heating with the highest energy efficiency**

The REMKO series is characterised by their compact dimensions, flexible application possibilities, and particularly by their microprocessor controlled gas burner technology. A total of three unit sizes with a heating capacity from 10.2 to 73.2 kW are available.
The units are suitable for both wall and ceiling mounting. A variety of exhaust gas and fresh air versions rounds out the flexible installation possibility of this series of units.

**Achieve maximum output**

With the gross calorific value technology, the energy contained in the exhaust gas is extracted from condensation in the heat exchanger.
In the process, the efficiency is optimized to a maximum.

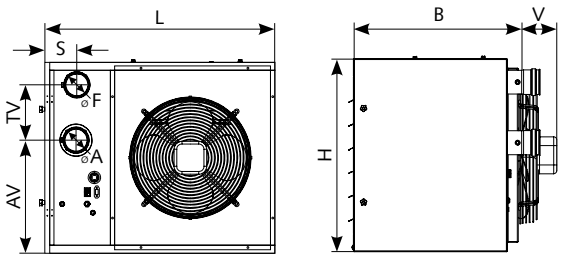

*REMKO GPC 35*

- High energy efficiency with condensing design and modulating gas burner technology
- Very flexible application possibilities
- Space-saving mounting on the wall or ceiling
- Rapid, cost-effective installation
- Wide range of accessories available
- Sound-optimized through series-standard Ziehl-Abegg fans
- Combustion chamber in INOX steel

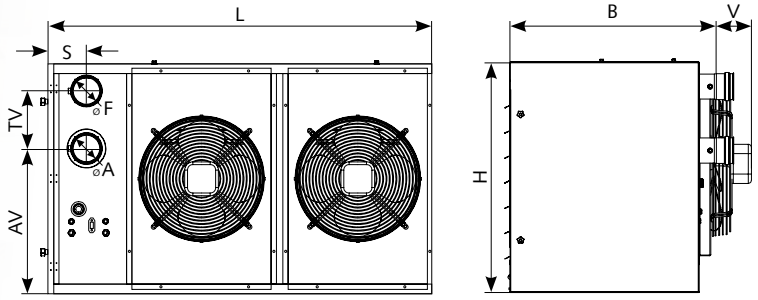
*High energy efficiency using modulating gas burner technology*

*Microprocessor-controlled technology*

**GPC 35 dimensions**

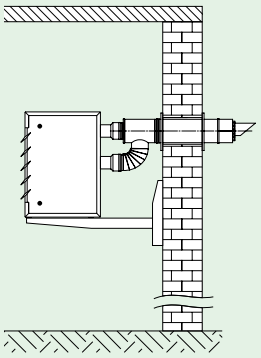



**Dimensions GPC 55/75**




### Outside wall installation

Unit installation, including the exhaust gas and fresh air versions, takes place according to classifications C13, C33, C43, C53, C63, and B23 of DVGW-TRGI 2008. The gas connection must be performed by a licensed installer. Before the installation of the exhaust gas duct through the outside wall, the district heating inspector must be consulted.



**Exhaust gas duct through wall with burner fresh air supply**

### Dimensions of GPC 35/-75

| Series | | L | B | H | V | A | F | AV | TV | S |
|---|---|---|---|---|---|---|---|---|---|---|
| GPC 35 | mm | 900 | 640 | 650 | 140 | 80 | 80 | 367 | 204 | 105 |
| GPC 55 | mm | 1240 | 640 | 740 | 140 | 80 | 80 | 457 | 204 | 105 |
| GPC 75 | mm | 1400 | 750 | 810 | 140 | 100 | 100 | 511 | 204 | 130 |

### Technical data

| Series | | GPC 35 | GPC 55 | GPC 75 |
|---|---|---|---|---|
| Rated heat load | kW | 10.1 – 34.8 | 15.5 – 58.0 | 22.0 – 78.0 |
| Rated heat capacity | kW | 10.2 – 32.8 | 16.1 – 53.6 | 23.1 – 73.2 |
| Condensate | l/h | 0.77 | 0.91 | 2.20 |
| Air capacity | m³/h | 3,800 | 5,200 | 6,800 |
| Fuel | | | Natural gas / propane gas | |
| Gas flow rate – natural gas H | m³/h | 1.06 – 3.68 | 1.64 – 6.13 | 2.32 – 8.25 |
| Gas flow rate – natural gas L | m³/h | 1.24 – 4.28 | 1.90 – 7.13 | 2.70 – 9.59 |
| Gas flow rate – propane gas | kg/h | 0.79 – 2.70 | 1.20 – 4.51 | 1.71 – 6.06 |
| Max. length of gas jet | m | 24 | 26 | 28 |
| Voltage supply | V/Hz | 230/1~/50 | 230/1~/50 | 230/1~/50 |
| Exhaust connection Ø | mm | 80 | 80 | 100 |
| Fresh air connection Ø | mm | 80 | 80 | 100 |
| Weight | kg | 102 | 117 | 175 |

# GAS/GROSS CALORIFIC VALUE HEATING SYSTEMS

## *GPC series with modulating gas burner in condensing design*


**Areas of application**

- Sales rooms
- Warehouses
- Production halls
- Retailers and supermarkets
- Trade areas
- Sports arenas

**Technical data**

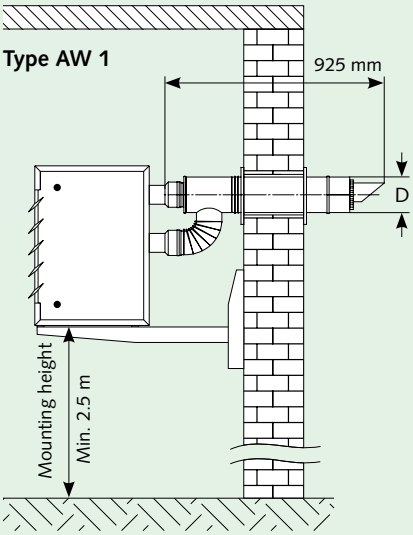
| Series * | | GPC 35 | GPC 55 | GPC 75 |
|---|---|---|---|---|
| Rated heat load | kW | 10.1 – 34.8 | 15.5 – 58.0 | 22.0 – 78.0 |
| Rated heat capacity | kW | 10.2 – 32.8 | 16.1 – 53.6 | 23.1 – 73.2 |
| Air capacity | m³/h | 3,800 | 5,200 | 6,800 |
| Design<br>Ref. no. | | **Natural gas H**<br>225530 | **Natural gas H**<br>225545 | **Natural gas H**<br>225560 |
| Design<br>Ref. no. | | **Natural gas L**<br>225531 | **Natural gas L**<br>225546 | **Natural gas L**<br>225561 |
| Design<br>Ref. no. | | **Propane gas**<br>225540 | **Propane gas**<br>225555 | **Propane gas**<br>225570 |
| * The gas connection must be performed by a licensed installer. | | | | |
| **Switchgear and control units** | | | | |
| Electronic temperature controller for 1 unit, **Type ATR-6**, surface installation, IP 30 protection class, automatic day/night economy, weekly programme, electrical remote control, error and operation messages | | 1011361 | 1011361 | 1011361 |
| Electronic temperature controller for 1-30 units (group switch), **Type ATR-6 G**, surface installation, protection class IP 54, automatic day/night economy, weekly programme, electrical remote control, external thermostat connection for mixed temperature, error and operation messages | | 1011363 | 1011363 | 1011363 |
| External temperature probe for **ATR-6 G** | | 1011364 | 1011364 | 1011364 |
| **Accessories** | | | | |
| Wall bracket<br>Design: Standard | | 228760 | 228760 | 228760 |
| Wall bracket<br>Design: Rotary | | 228761 | 228762 | 228763 |
| Mounting set for attachment to ceiling with horizontal air discharge, complete, **Type MDH 1** | | 228765 | 228765 | 228765 |
| Gas connection tube made of stainless steel fabric, length 500 mm | | 228768 | 228768 | 228769 |
| Neutralisation box | | 260400 | 260400 | 260400 |
| Condensate pump for neutralisation box | | 260410 | 260410 | 260410 |
| Condensate tube for neutralisation box, running metre | | 260420 | 260420 | 260420 |
| Refill granulate for neutralisation box | | 260430 | 260430 | 260430 |

*Electronic temperature regulation,* ***Type ATR-6,*** *Ref. no. 1011361*

*Electronic temperature controller,* ***Type ATR-6 G,*** *Ref. no. 1011363*

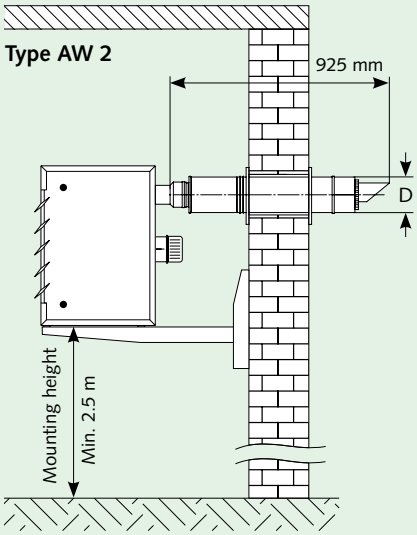
**LAS balanced flue system through the wall with burner fresh air supply**

**Type AW 1**




**Exhaust gas duct through wall**

**Type AW 2**




**Note**

Please observe the following pipe diameters during planning:

| Series | Pipe Ø D |
|---|---|
| GPC 35 | 125 mm |
| GPC 55 | 125 mm |
| GPC 75 | 150 mm |

For sample installations, see Type **AW 1** and **AW 2**

## Exhaust gas duct, outside wall

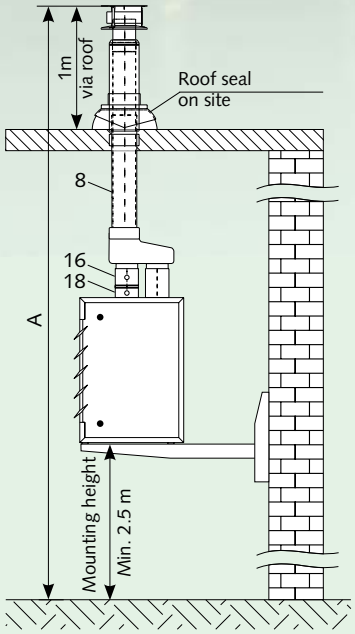
| Series | GPC 35 | GPC 55 | GPC 75 |
|---|---|---|---|
| LAS balanced flue system with integrated burner fresh air supply for exterior wall installation, incl. wind guard, 925 mm long, **Type AW 1** | 228770 | 228770 | 228771 |
| Exhaust gas pipe for exterior wall installation, incl. wind guard and protective grid for combustion air intake, 925 long, **Type AW 2** | 228772 | 228772 | 228773 |
| **Individual sections** | | | |
| Exhaust gas or fresh air pipe, length 250 mm | 228868 | 228868 | 228869 |
| Exhaust gas or fresh air pipe, length 500 mm | 228871 | 228871 | 228876 |
| Exhaust gas or fresh air pipe, length 1000 mm | 228872 | 228872 | 228877 |
| Exhaust or fresh air joint, 90° | 228910 | 228910 | 229010 |
| Exhaust or fresh air joint, 45° | 228909 | 228909 | 229009 |
| Exhaust gas pipe with condensate drain, length 185 mm | 228955 | 228955 | 229055 |
| Protective grid for combustion air intake | 228960 | 228960 | 229060 |

CE certificate no. CE 0432-BPR-119933

# GAS/GROSS CALORIFIC VALUE HEATING SYSTEMS

## *GPC series with modulating gas burner in condensing design*

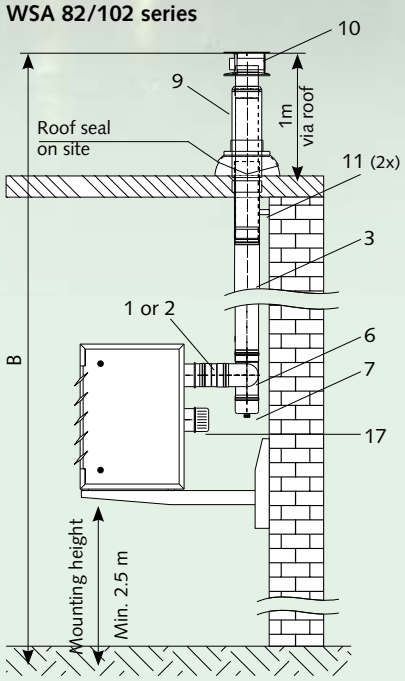
**LAS balanced flue system**
**WSA 81/101 series**




***LAS balanced flue system via roof with burner fresh air supply WSA 81/101 series, single-walled aluminium, complete***
****Consisting of:***

*Pos. 8* *1 unit roof penetration LAS system with burner, fresh air supply, incl. rain hood, overall length 1850 mm*
*Pos. 16* *1 exhaust gas pipe with condensate drain, vertical, length 185 mm*
*Pos. 18* *1 connection port with test nipple*

**Exhaust gas duct**
**WSA 82/102 series**




**Exhaust gas duct via roof**
**WSA 82/102 series,**
**single-walled aluminium, complete,**
***Consisting of:**

*Pos. 1* *1 exhaust gas or fresh air pipe, length 250 mm (for WSA 102)*
*Pos. 2* *1 exhaust gas or fresh air pipe, length 500 mm (for WSA 82)*
*Pos. 3* *1 exhaust gas or fresh air pipe, length 1000 mm*
*Pos. 6* *1 T-connection, 90°*
*Pos. 7* *1 cleaning component with condensate drain*
*Pos. 9* *1 roof penetration*
*Pos. 10* *1 rain hood*
*Pos. 11* *2 wall mounts*
*Pos. 17* *1 protective grid for combustion air intake*

** The slanted/flat roof penetration must be ordered as well if required.*

## Chimney height

| Series | A | B | C |
|---|---|---|---|
| GPC 35 | 5.15 | 5.65 | 2.65 |
| GPC 55 | 5.25 | 5.75 | 2.65 |
| GPC 75 | 5.30 | 5.80 | 2.80 |

Dimensions in meters

## Note

Please observe the following pipe diameters when planning the necessary roof penetrations.

| Series | Type | Pipe Ø |
|---|---|---|
| GPC 35 | WSA 81 | 125 mm |
| GPC 35 | WSA 82 | 95 mm |
| | | |
| GPC 55 | WSA 81 | 125 mm |
| GPC 55 | WSA 82 | 95 mm |
| | | |
| GPC 75 | WSA 101 | 150 mm |
| GPC 75 | WSA 102 | 115 mm |

## Exhaust gas duct via roof

| | Appropriate for unit type | GPC 35-55 | GPC 75 |
|---|---|---|---|
| | **Series** | **WSA 81** | **WSA 101** |
| | LAS balanced flue system with integrated burner fresh air supply | | |
| | Ref. no. | 228901 | 229001 |
| | **Series** | **WSA 82** | **WSA 102** |
| | Exhaust system incl. protective grid, for combustion air extraction from the installation room | | |
| | Ref. no. | 228902 | 229002 |

* Pitched/flat roof penetration should also be ordered where required

| | Individual sections | Ref. no. | Ref. no. |
|---|---|---|---|
| 1 | Exhaust gas or fresh air pipe, length 250 mm | 228868 | 228869 |
| 2 | Exhaust gas or fresh air pipe, length 500 mm | 228871 | 228876 |
| 3 | Exhaust gas or fresh air pipe, length 1000 mm | 228872 | 228877 |
| 4 | Exhaust or fresh air joint, 90° | 228910 | 229010 |
| 5 | Exhaust or fresh air joint, 45° | 228909 | 229009 |
| 6 | T-connection, 90° | 228915 | 229015 |
| 7 | Cleaning component with condensate drain | 228920 | 229020 |
| 8 | LAS system roof penetration with burner fresh air supply, including rain hood, total length 1850 mm | 228965 | 229065 |
| 9 | Roof penetration, total length 1500 mm | 228930 | 229030 |
| 10 | Rain hood | 228935 | 229035 |
| 11 | Wall mount | 228940 | 229040 |
| 12 | Universal slanted roof penetration for WSA 82/102 | 228945 | 229045 |
| 13 | Flat roof penetration for WSA 82/102 | 228950 | 229050 |
| 14 | Universal pitched roof penetration for WSA 81/101 and WSA 83/103 | 228970 | 229070 |
| 15 | Flat roof penetration for WSA 81/101 and WSA 83/103 | 228975 | 229075 |
| 16 | Exhaust gas pipe with condensate drain, length 185 mm | 228955 | 229055 |
| 17 | Protective grid for combustion air intake | 228960 | 229060 |
| 18 | Connection ports with test nipple | 228980 | 229080 |
| 19 | Roof penetration, LAS system with burner fresh air supply, incl. rain hood, "vertical" design, total length 1850 mm | 228966 | 229066 |
| 20 | Exhaust gas or fresh air pipe, length 185 mm | 228967 | 229067 |

CE certificate no. CE 0432-BPR-119933

# UNIVERSAL HEATING SYSTEMS

## *VRS universal heating systems in a planning-oriented modular system For oil and gas combustion*

*REMKO VRS*
*Vertical design*

*REMKO VRS*
*Horizontal design*

**REMKO VRS**

**Rapid heat, adapted to your needs**

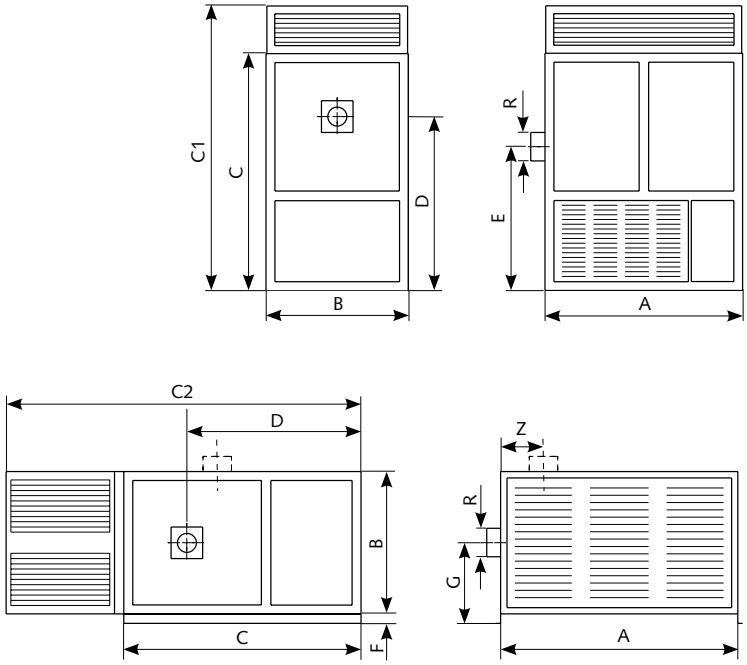
For economical heating in industrial halls and warehouses, workshops, sports centers and exhibition halls, or glass and plastic film greenhouses, these REMKO heating systems are incomparable. Whether you use EL heating oil, propane or natural gas, VRS heating units always generate the heat you need: quickly, safely, and economically.
In contrast with conventional hot water heating systems, these heating systems function without a preheating time. In addition, the decentralized setup lowers mounting and investment costs in rooms to be heated. The combustion-technical efficiency amounts to up to 93%.

- Space-saving installation with low mounting effort
- Combustion chamber with stainless steel heat exchanger
- Individual equipping with air filters and louvre dampers possible in the air intake
- Air duct connection possibilities
- Flexible usage possibilities
- High quality and long service life
- Noiseless radial fans
- Easy access to all components due to maintenance-friendly design

*Electronic moisture-proof room thermostat, Type ETR-1, no connection accessories*
*Ref. no. 1011241*

*Electronic temperature regulation, Type ATR-5, surface mounting*
*Ref. no. 1011342*

## Dimensions




## VRS dimensions

| Series | | VRS 25 | VRS 50 | VRS 75 | VRS 100 | VRS 130 | VRS 170 | VRS 200 | VRS 270 | VRS 340 | VRS 440 | VRS 540 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | mm | 850 | 1,000 | 1,250 | 1,250 | 1,530 | 1,650 | 1,650 | 1,690 | 1,690 | 2,305 | 2,305 |
| B | mm | 600 | 800 | 800 | 900 | 1,010 | 1,200 | 1,200 | 1,290 | 1,290 | 1,770 | 1,770 |
| C | mm | 1,200 | 1,400 | 1,400 | 1,500 | 1,735 | 1,900 | 1,900 | 2,400 | 2,400 | 3,270 | 3,270 |
| C1 | mm | 1,500 | 1,700 | 1,700 | 1,800 | 2,095 | 2,260 | 2,260 | 2,960 | 2,960 | 4,030 | 4,030 |
| C2 | mm | 1,570 | 1,870 | 2,070 | 2,270 | 2,510 | 2,675 | 2,775 | 3,535 | 3,535 | 4,770 | 4,770 |
| D | mm | 955 | 1,050 | 1,050 | 1,100 | 1,230 | 1,330 | 1,330 | 1,090 | 1,090 | 1,535 | 1,535 |
| E | mm | 815 | 900 | 900 | 910 | 1,075 | 1,160 | 1,160 | 2,055 | 2,055 | 2,865 | 2,865 |
| F | mm | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 40 | 40 | 40 | 40 |
| G | mm | 335 | 435 | 435 | 485 | 540 | 635 | 635 | 685 | 685 | 925 | 925 |
| R ø* | mm | 150 | 150 | 180 | 180 | 200 | 200 | 200 | 300 | 300 | 350 | 350 |
| Z | mm | 190 | 190 | 190 | 190 | – | – | – | – | – | – | – |
| Weight | kg | 150 | 240 | 310 | 360 | 550 | 730 | 820 | 832 | 874 | 1,542 | 1,792 |

C1 = Dimensions with air discharge hood HG

C2 = Dimensions with air discharge hood HB 90

*Changes are allowed without prior notice and are based on cross-section calculation according to DIN 4705

## Technical data

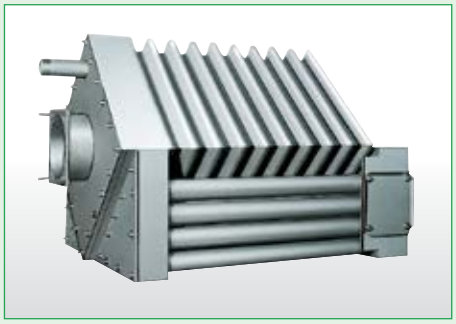
| Series | | VRS 25 | VRS 50 | VRS 75 | VRS 100 | VRS 130 | VRS 170 | VRS 200 | VRS 270 | VRS 340 | VRS 440 | VRS 540 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Max. rated heat load | kW | 33 | 62 | 89 | 125 | 160 | 208 | 249 | 278 | 332 | 442 | 543 |
| Rated heat capacity | kW | 29 | 57 | 83 | 116 | 149 | 193 | 232 | 254 | 305 | 405 | 499 |
| Air capacity | m³/h | 1,760 | 3,950 | 5,270 | 7,950 | 9,800 | 12,000 | 13,900 | 18,960 | 22,690 | 30,480 | 37,170 |
| Fuel | | EL heating oil, natural gas, or liquid gas | | | | | | | | | | |
| Max. fuel consumption * | kg/h | 2.8 | 5.2 | 7.5 | 10.6 | 13.5 | 17.5 | 21.0 | 23.4 | 28.0 | 37.3 | 45.8 |
| Voltage supply | V/Hz | ** | ** | 400/3~N/50 | | | | | | | | |

* When using EL heating oil

** 400/3~N/50 or 230/1~/50

### Tailored solutions for every situation

REMKO VRS heating units are manufactured according to the highest technical specifications. Without a time-consuming installation as conventional hot water heating systems. The devices are suited not only as individual units, but also as centralized units for channel connection. Extensive special accessories on the air intake and discharge sides are available. The intake air is heated using a heat exchanger with an oil or gas burner and is then distributed evenly throughout the room using a silent radial fan. In summer, this fan provides pleasant fresh air. Our range of units with heating capacities ranging from 33 to 543 kW enables you to select the right type of unit.



*Ready-to-install combustion chamber with stainless steel heat exchanger*

# UNIVERSAL HEATING SYSTEMS

## *VRS series*
## *in a planning-oriented modular system for oil and gas combustion*

### Technical data

| Series | | | VRS 25 | VRS 50 | VRS 75 | VRS 100 |
|---|---|---|---|---|---|---|
| Max. rated heat load | | kW | 33 | 62 | 89 | 125 |
| Rated heat capacity | | kW | 29 | 57 | 83 | 116 |
| Air capacity | | m³/h | 1,760 | 3,950 | 5,270 | 7,950 |
| **heating systems with oil burner *** with air discharge hood, 4-sided, with switching and control units, rear chimney adapter Vertical unit: **Discharge above** | | | 360110 | 361110 | 362110 | 363110 |
| **heating systems with oil burner *** with air discharge hood HB-90, with switching and control units, rear chimney adapter. Horizontal unit: **Discharge left** | | | 360210 | 361210 | 362210 | 363210 |
| **heating systems with oil burner *** with air discharge hood HB-90, with switching and control units, rear chimney adapter. Horizontal unit; **Discharge right** | | | 360310 | 361310 | 362310 | 363310 |
| **Heater without burner** Without air discharge hood, with switchgear and control units, rear exhaust pipe adapter | | | | | | |
| Vertical unit | **Discharge above** | Pressure | 1.1 360001 | 0.6 361001 | 1.0 362001 | 0.8 363001 |
| Horizontal unit | **Discharge left** | p external | 1.1 360050 | 0.6 361050 | 1.0 362050 | 0.8 363050 |
| Horizontal unit | **Discharge right** | mbar | 1.1 360060 | 0.6 361060 | 1.0 362060 | 0.8 363060 |
| **Surcharge for increased pressure** | | Pressure<br>p external<br>mbar | 1.7 360006<br>2.2 360007<br>2.8 360008 | 1.4 361006<br>2.0 361007<br>3.3 361008<br>4.7 361009 | 1.6 362006<br>2.3 362007<br>3.0 362008<br>4.3 362009 | 1.7 363006<br>2.4 363007<br>3.5 363008 |
| **Burner, WLE design ***** | | | | | | |
| Fan oil burner | | | 945010 | 946010 | 948010 | 948010 |
| Oil filter 3/8", 2-strand design | | | 1002526 | 1002526 | 1002526 | 1002526 |
| Oil filter 3/8", 1-strand design | | | 1002500 | 1002500 | 1002500 | 1002500 |
| Burner fresh-air box | | | 290205 | 291205 | 292205 | 293205 |
| Burner fresh-air pipe, flexible (delivery length, 5 m jumped) | | | 1090207 | 1090207 | 1090207 | 1090207 |
| Intake part with protective grid (burner fresh air) | | | 1090209 | 1090209 | 1090209 | 1090209 |
| Fan-assisted natural gas burner *** | | | 954605 | 954610 | 954620 | 954640 |
| Fan-assisted propane gas burner *** | | | 954705 | 954710 | 954720 | 954740 |
| **Air discharge hoods with air outlet grids for direct air discharge** | | | | | | |
| 3-sided | F+Ri+L / Re+Ri+L | Type HG | 290169 | 291169 | 292169 | 293169 |
| 3-sided | F+Ri+Re / F+L+Re | Type HG | 290170 | 291170 | 292170 | 293170 |
| 4-sided | F+Ri+L+Re | Type HG | 360171 | 361171 | 362171 | 363171 |
| Discharge hood 90° | F/Re | Type HB-90 | 290172 | 291172 | 292172 | 293172 |
| **Air intake accessories and wall brackets** | | | | | | |
| Metal panel | Pos. IV | Type BB | 290105 | 291105 | 292105 | 293105 |
| Protective grid for air intake | Pos. IV | Type S | 290109 | 291109 | 292109 | 293109 |
| Flexible pipe | Pos. I-III | Type SG | 290110 | 291110 | 292110 | 293110 |
| Flexible pipe | Pos. IV | Type SG | 290123 | 291123 | 292123 | 293123 |
| Dust filter, 3-sided (for free air intake) | Pos. I-III | Type F | 290111 | 291111 | 292111 | 293111 |
| Replacement filter mat | | Type EF | 290112 | 291112 | 292112 | 293112 |
| Dust filter for duct connection | Pos. I-III | Type FK | 290113 | 291113 | 292113 | 293113 |
| Dust filter for duct connection | Pos. IV | Type FK | 290114 | 291114 | 292114 | 293114 |
| Replacement filter mat | | Type EFK | 290115 | 291115 | 292115 | 293115 |
| Shutter flap combinations | I-III | Type JK | 290119 | 291119 | 292119 | 293119 |
| Shutter flap combinations | Pos. I-III / V | Type JK | 290120 | 291120 | 292120 | 293120 |
| Actuator with surface-mounted switch Open/StopClose | | | 320245 | 320245 | 320245 | 320245 |
| Actuator, infinitely variable, with remote potentiometer, surface mounting | | | 320251 | 320251 | 320251 | 320251 |
| Wall bracket for vertical unit | | | 290210 | 291210 | 292210 | 293210 |
| Wall bracket for horizontal device **** | | | 322210 | 321212 | 325210 | 325210 |
| **Special design** | | | | | | |
| Exhaust gas adapt., right (Ref. no. last digit of 2 = left, Ref. no. last digit of 3 = top) | | | 290061 | 291061 | 292061 | 293061 |
| **Other accessories** | | | | | | |
| Moisture-proof room thermostat, **Type RT-1**, IP 54, without connection accessories | | | 1011240 | 1011240 | 1011240 | 1011240 |
| Moisture-proof room thermostat, **Type RT-5**,IP 54, ready for plug assembly | | | 1011250 | 1011250 | | |
| Electronic moisture-proof room thermostat, **Type ETR-1**, with display, IP 54 protection class, without connection accessories | | | 1011241 | 1011241 | 1011241 | 1011241 |
| Fully automatic, differential temperature controller, **Type ATR-3**, including temperature probe, weekly programme, IP 54 protection class | | | 1011290 | 1011290 | 1011290 | 1011290 |
| Electronic temperature controller, **Type ATR-4**, with temperature probe, surface mounting, weekly programme, IP 20 protection class | | | 1011340 | 1011340 | 1011340 | 1011340 |
| Electronic temperature controller, **Type ATR-5**, with temperature probe, surface mounting, weekly programme, IP 54 protection class | | | 1011342 | 1011342 | 1011342 | 1011342 |
| Temperature probe set for 4-point mixed temperature recording***** | | | 1011343 | 1011343 | 1011343 | 1011343 |

* Brand product of our choice

** Attention: In the case of unit orders without combustion-technical commissioning we provide the burners in the box separately without pre-adjustment.

*** The gas connection must be made by a licensed installer.

**** In the case of exhaust gas systems for internal mounting, please enter the bracket length in the order.

**With switch box in the standard design**

All components which control the fan and burner are organised in a clear manner in the switch cabinet. For external control, various thermostats and controls are included in the accessories range.

| VRS 130 | VRS 170 | VRS 200 | VRS 270 | VRS 340 | VRS 440 | VRS 540 |
|---|---|---|---|---|---|---|
| 160 | 208 | 249 | 277 | 332 | 442 | 543 |
| 149 | 193 | 232 | 254 | 305 | 405 | 499 |
| 9,800 | 12,000 | 13,900 | 18,960 | 22,680 | 30,480 | 37,170 |
| 364110 | 365110 | 366110 | – | – | – | – |
| – | – | – | – | – | – | – |
| – | – | – | – | – | – | – |
| 1.0 364001<br>1.0 364050<br>1.0 364060 | 0.5 365001<br>0.5 365050<br>0.5 365060 | 0.7 366001<br>0.7 366050<br>0.7 366060 | 0.5 330000<br>0.5 330010<br>0.5 330020 | 0.6 331000<br>0.6 331010<br>0.6 331020 | 0.5 332000<br>0.5 332010<br>0.5 332020 | 0.5 333000<br>0.5 333010<br>0.5 333020 |
| 1.7 364006<br>2.6 364007 | 1.3 365006<br>1.7 365007<br>2.6 365008<br>4.1 365009 | 1.4 366006<br>2.2 366007<br>3.4 366008 | 0.9 330006<br>2.1 330007<br>2.9 330008<br>4.0 330009 | 1.0 331006<br>1.9 331007<br>2.8 331008 | 0.9 332006<br>2.0 332007<br>2.9 332008<br>3.8 332009 | 0.9 333006<br>2.1 333007<br>3.0 333008<br>3.9 333009 |
| 948010<br>1002526<br>1002500 | 948510<br>1002526<br>1002500 | 949010<br>1002526<br>1002500 | 949010<br>1002526<br>1002500 | 949010<br>1002526<br>1002500 | 950015<br>1002526<br>1002500 | 950015<br>1002526<br>1002500 |
| 294205 | 295205 | 296205 | 330205 | 331205 | 332205 | 333205 |
| 1008400 | 1008400 | 1008400 | 1008400 | 1008395 | 1008395 | 1008395 |
| 1094209 | 1094209 | 1094209 | 1094209 | 1094210 | 1094210 | 1094210 |
| 954640 | 954650 | 954660 | 954660 | 954660 | 954685 | 954695 |
| 954740 | 954750 | 954760 | 954760 | 954760 | | |
| 294169 | 295169 | 296169 | 330169 | 331169 | 332169 | 333169 |
| 294170 | 295170 | 296170 | 330170 | 331170 | 332170 | 333170 |
| 364171 | 365171 | 366171 | 330171 | 331171 | 332171 | 333171 |
| 294172 | 295172 | 296172 | 330172 | 331172 | 332172 | 333172 |
| 294105 | 295105 | 296105 | 330105 | 331105 | 332105 | 333105 |
| 294109 | 295109 | 296109 | 330109 | 331109 | 332109 | 333109 |
| 294110 | 295110 | 296110 | 330110 | 331110 | 332110 | 333110 |
| 294123 | 295123 | 296123 | 330123 | 331123 | 332123 | 333123 |
| 294111 | 295111 | 296111 | 330111 | 331111 | 332111 | 333111 |
| 294112 | 295112 | 296112 | 330112 | 331112 | 332112 | 333112 |
| 294113 | 295113 | 296113 | 330113 | 331113 | 332113 | 333113 |
| 294114 | 295114 | 296114 | 330114 | 331114 | 332114 | 333114 |
| 294115 | 295115 | 296115 | 330115 | 331115 | 332115 | 333115 |
| 294119 | 295119 | 296119 | 330119 | 331119 | 332119 | 333119 |
| 294120 | 295120 | 296120 | 330120 | 331120 | 332120 | 333120 |
| 320245 | 320245 | 320245 | 320245 | 320245 | 320245 | 320245 |
| 320251 | 320251 | 320251 | 320251 | 320251 | 320251 | 320251 |
| 294210 | 295210 | 296210 | 325210 | 325210 | – | – |
| 328210 | 327212 | 327212 | 327212 | 327212 | – | – |
| – | – | – | – | – | – | – |
| 1011240 | 1011240 | 1011240 | 1011240 | 1011240 | 1011240 | 1011240 |
| 1011241 | 1011241 | 1011241 | 1011241 | 1011241 | 1011241 | 1011241 |
| 1011290 | 1011290 | 1011290 | 1011290 | 1011290 | 1011290 | 1011290 |
| 1011340 | 1011340 | 1011340 | 1011340 | 1011340 | 1011340 | 1011340 |
| 1011342 | 1011342 | 1011342 | 1011342 | 1011342 | 1011342 | 1011342 |
| 1011343 | 1011343 | 1011343 | 1011343 | 1011343 | 1011343 | 1011343 |

***** Can only be set in combination with electronic temperature regulation (ETR-1, ATR-3, ATR-4, ATR-5 and MAK-2)

# HOT WATER HEATING SYSTEMS

## *PWW series*
## *The intelligent supplement to hot water heating systems*


*REMKO PWW in painted design (surcharge)*

*The unit is supplied with a galvanised design in the standard version.*



**REMKO PWW**

**Best suited for warehouses and supermarkets**

The sophisticated design is suitable for both wall and ceiling installation. With a thermal output ranging from 4 to 135 kW, an optimum expansion of existing or planned water-heating systems is possible at any time. Easily attachable mounting brackets permit a rapid installation of the devices.

The load-bearing, galvanised, solid steel sheet housings are already supplied. The air discharge fins are individually infinitely variable. The heat exchangers are delivered with a copper-aluminium finish. REMKO PWW units are designed for warm and hot pump water at temperatures up to 110°C and a max. permissible operating pressure of 16 bar.

An aerodynamically shaped, silent Ziehl-Abegg sickle-shaped axial fan with a maintenance-free three-phase two-speed external rotor motor is installed as standard.

- Fitted as standard with a Ziehl-Abegg sickle-shaped axial fan
- Speed range regulation 2-way and 5-way optional
- High-quality design and construction
- Extremely low noise by using optimum coordinated components
- Low spatial requirements
- Extremely easy to service

**Capacity data summary**

| Series | | PWW 30-4 | | PWW 50-4 | | PWW 80-4 | | PWW 100-4 | |
|---|---|---|---|---|---|---|---|---|---|
| Max. thermal output at 80/60 and air intake temperature of –15°C | kW | 30 | | 53 | | 85 | | 126 | |
| PWW heating medium | °C | 90/70 | 75/65 | 90/70 | 75/65 | 90/70 | 75/65 | 90/70 | 75/65 |
| Thermal output | kW | 27.8/24.1 | 17.8/15.0 | 45.1/39.8 | 29.1/26.3 | 75.6/64.3 | 47.3/40.9 | 110.9/96.3 | 72.8/64.7 |
| at air intake temperature | tLE °C | ± 0 | + 20 | ± 0 | + 20 | ± 0 | + 20 | ± 0 | + 20 |
| at air outlet temperature | tLA °C | 42/46 | 52/55 | 39/41 | 49/52 | 44/48 | 52/55 | 40/43 | 51/53 |
| Nominal air flow rate | m³/h | 1850/1500 | 1850/1500 | 3150/2770 | 3150/2770 | 4730/3700 | 4730/3700 | 7670/6180 | 7670/6180 |
| Sound pressure level | dB(A) | 55/49 | 55/49 | 58/54 | 58/54 | 55/49 | 55/49 | 59/55 | 59/55 |
| Heating medium connection | Inch | R1 ¼ | R1 ¼ | R1 ¼ | R1 ¼ | R1 ¼ | R1 ¼ | R1 ½ | R1 ½ |
| Voltage supply | V/Hz | 400/3~/50 | | | | | | | |
| Weight | kg | 27 | 27 | 36 | 36 | 51 | 51 | 68 | 68 |

## Technical data

| Series | | PWW 30-2 | PWW 50-2 | PWW 80-2 | PWW 100-2 |
|---|---|---|---|---|---|
| Heat exchanger package with 2 register rows | | 1686010 | 1686040 | 1686070 | 1686100 |
| **Series** | | **PWW 30-3** | **PWW 50-3** | **PWW 80-3** | **PWW 100-3** |
| Heat exchanger package with 3 register rows | | 1686020 | 1686050 | 1686080 | 1686110 |
| **Series** | | **PWW 30-4** | **PWW 50-4** | **PWW 80-4** | **PWW 100-4** |
| Heat exchanger package with 4 register rows | | 1686030 | 1686060 | 1686090 | 1686120 |
| **Special formats** | | | | | |
| **Series** | | **PWW 30** | **PWW 50** | **PWW 80** | **PWW 100** |
| Extra cost for unit lacquer coating in RAL colours as required | | 1686001 | 1686002 | 1686003 | 1686004 |
| **Switchgear** | | | | | |
| Switchgear MSRD 4.0, 2-stage, 400 V | | 1686200 | 1686200 | 1686200 | 1686200 |
| Switchgear MSRD-K, 2-speed, 400 V, incl. frost-protection and mixed-air flap control (open/close) | | 1686201 | 1686201 | 1686201 | 1686201 |
| MAK-2, 2-speed, 400 V, fully electronic design for automatic operation, including frost-protection and mixed-air flap control, day/night temperature regulation | | 385330 | 385330 | 385330 | 385330 |
| Switchgear 3 EG, 5-stage, 3.0 A, 400 V | | 385300 | 385300 | 385300 | 385300 |
| Switchgear 5 EG, 5-stage, 5.2 A, 400 V | | 385301 | 385301 | 385301 | 385301 |
| Repair switch RS 3, separate | | 513100 | 513100 | 513100 | 513100 |
| Motor terminal box AKG-5 for a parallel group control of max. 5 units | | 385303 | 385303 | 385303 | 385303 |
| **Accessories** | | | | | |
| Brackets for wall and ceiling mounting | KO | 385217 | 385218 | 385219 | 385220 |
| Wall brackets for filter and mixed air box combination | WFM | 385370 | 385371 | 385372 | 385373 |
| Fresh-air intake hood | ALH | 385375 | 385376 | 385377 | 385378 |
| Rain collar with duct section, 1000 mm | RK | 385380 | 385381 | 385382 | 385383 |
| Duct adapter, 500 mm | KA 5 | 385385 | 385386 | 385387 | 385388 |
| Duct adapter, 1000 mm | KA 10 | 385390 | 385391 | 385392 | 385393 |
| Flexible pipe | SG | 385395 | 385396 | 385397 | 385398 |
| Filter box | FK | 385400 | 385401 | 385402 | 385403 |
| Replacement filter mat | EF | 385405 | 385406 | 385407 | 385408 |
| Mixed-air box without actuator | MLK | 385410 | 385411 | 385412 | 385413 |
| Recirculating air intake fitting | UA | 385415 | 385416 | 385417 | 385418 |
| Fresh-air intake grid | AG | 385420 | 385421 | 385422 | 385423 |
| Air discharge shutter (vertical fins) | B | 385193 | 385194 | 385195 | 385196 |
| Ceiling air discharge nozzle | AD | 385213 | 385214 | 385215 | 385216 |
| Air discharge hood, 4-sided | HG | 385197 | 385198 | 385199 | 385212 |
| Flap actuator, Off/Pause/On | KSH | 385290 | 385290 | 385290 | 385290 |
| Flap actuator, infinitely variable | KSP | 385289 | 385289 | 385289 | 385289 |
| 3-position switch, surface mounting | SK | 290246 | 290246 | 290246 | 290246 |
| Remote potentiometer, surface mounting | FP | 385288 | 385288 | 385288 | 385288 |
| Frost protection thermostat | FS | 385305 | 385305 | 385305 | 385305 |
| Circular exhaust for foil tube connector 450 Ø | RF | 1085310 | 1085320 | | |
| Circular exhaust for foil tube connector 600 Ø | RF | | | 1085330 | 1085340 |
| Injection vent, fitted to the wall | IJ | 385350 | 385351 | 385352 | 385353 |
| Injection vent, fitted to the ceiling | IJ | 385360 | 385361 | 385362 | 385363 |

| Other accessories | | | | |
|---|---|---|---|---|
| Moisture-proof room thermostat, **Type RT-1**, IP 54, without connection accessories | 1011240 | 1011240 | 1011240 | 1011240 |
| Electronic moisture-proof room thermostat, **Type ETR-1**, with display, IP 54 protection class, without connection accessories | 1011241 | 1011241 | 1011241 | 1011241 |
| Fully automatic, differential temperature controller, **Type ATR-3**, including temperature probe, weekly programme, IP 54 protection class | 1011290 | 1011290 | 1011290 | 1011290 |
| Electronic temperature controller, **Type ATR-4**, with temperature probe, weekly programme, surface mounting, IP 20 protection class | 1011340 | 1011340 | 1011340 | 1011340 |
| Electronic temperature controller, **Type ATR-5**, including temperature probe, weekly programme, surface mounting, IP 54 protection class | 1011342 | 1011342 | 1011342 | 1011342 |
| Temperature probe set for 4-point mixed temperature recording* | 1011343 | 1011343 | 1011343 | 1011343 |

* Can only be set in combination with electronic temperature regulation (ETR-1, ATR-3, ATR-4, ATR-5, and MAK-2)

*Switchgear MSRD 4.0 2-speed*

*MSRD-K switchgear 2-speed*

*Electronic temperature controller, ATR-7*

*MAK-2, 400 V, fully automatic 2-speed control*

*Electronic temperature controller ATR-4*

## *PWW Series*

*REMKO PWW*
*in galvanised design*

**Application examples:**

① Wall opening appropriate to air inlet grid size.

② The mixed-air box is fastened to a load-bearing outside wall using the wall bracket WFM.

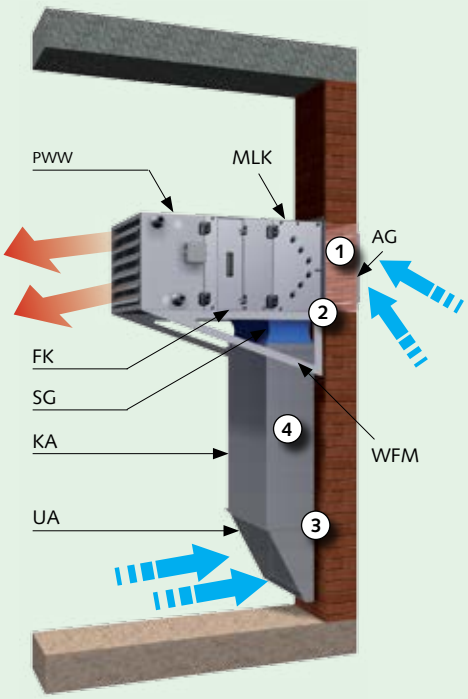
③ The recirculating air intake duct and the air intake adapter are attached to the outside wall on site.

④ The vertical section of this system arrangement is to be attached to the wall on site using brackets in such a way that the flexible pipes do not have to take up the load.

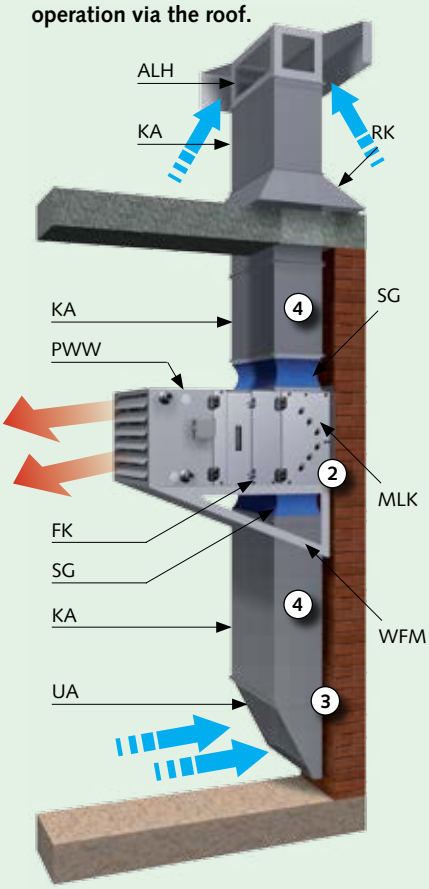
**Legend:**

AG = Fresh-air intake grid
ALH = Fresh-air intake hood
FK = Filter box
KA = Duct adapter
KO = Brackets
MLK = Mixed-air box
RK = Rain collar
SG = Flexible pipe
WFM = Wall bracket
IJ = Injection shutter

**Recirculating air/fresh air operation via the outside wall.**

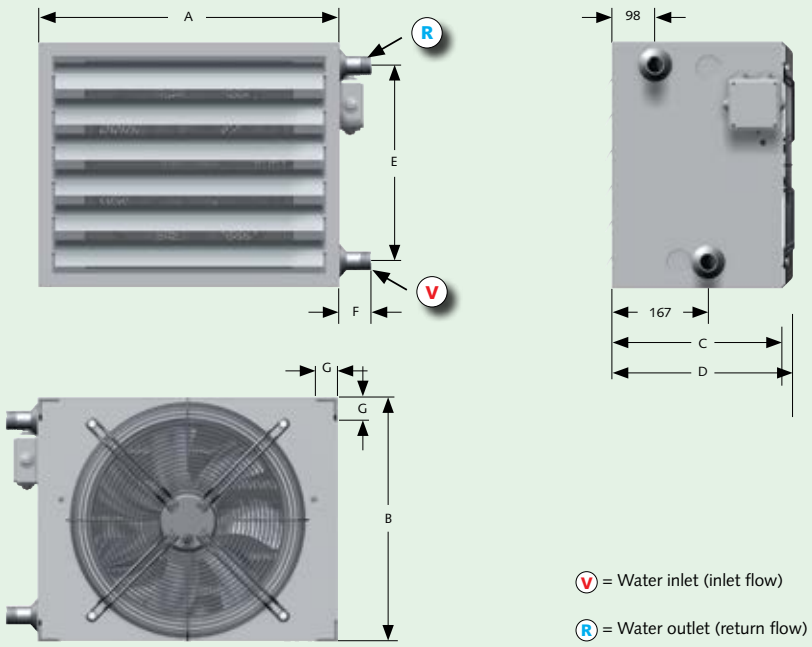



**Recirculating air /fresh air operation via the roof.**




We reserve the right to make changes to dimensions and the design in the interest of technical advances.

## Dimensions




(V) = Water inlet (inlet flow)

(R) = Water outlet (return flow)

## Dimensions

| Mass mm | PWW 30 | | | PWW 50 | | | PWW 80 | | | PWW 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 560 | | | 640 | | | 800 | | | 880 | | |
| B | 440 | | | 515 | | | 630 | | | 740 | | |
| C | 360 | | | 360 | | | 360 | | | 390 | | |
| D | 403 | | | 406 | | | 412 | | | 452 | | |
| E | 344 | | | 419 | | | 534 | | | 644 | | |
| F | 80 | | | 80 | | | 80 | | | 80 | | |
| G | 45 | | | 45 | | | 45 | | | 45 | | |
| **Mass inch** | **30-2** | **30-3** | **30-4** | **50-2** | **50-3** | **50-4** | **80-2** | **80-3** | **80-4** | **100-2** | **100-3** | **100-4** |
| V | R ¾“ | R 1“ | R 1¼“ | R ¾“ | R 1“ | R 1¼“ | R 1“ | R 1¼“ | R 1¼“ | R 1¼“ | R 1½“ | R 1½“ |
| R | R ¾“ | R 1“ | R 1¼“ | R ¾“ | R 1“ | R 1¼“ | R 1“ | R 1¼“ | R 1¼“ | R 1¼“ | R 1½“ | R 1½“ |

# CEILING VENTILATION UNIT

## *PWL...H series*
## *The elegant solution*
## *for heating and cooling*

### Technical data

| Series | | PWL 101 H | | PWL 102 H | | PWL 103 H | | PWL 201 H | |
|---|---|---|---|---|---|---|---|---|---|
| Max. thermal output at 90/70 and air intake temperature of 0 °C | kW | 16.5 | | 26.7 | | 34.4 | | 20.8 | |
| PWW heating medium | °C | 90/70 | 70/50 | 90/70 | 70/50 | 90/70 | 70/50 | 90/70 | 70/50 |
| Thermal output | kW | 16.5/14.7 | 12.0/10.7 | 26.7/24.1 | 19.5/17.8 | 34.4/29.7 | 25.4/22.0 | 20.8/18.7 | 14.5/13.0 |
| at air intake temperature | tLE °C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| at air outlet temperature | tLA °C | 23/24 | 16/18 | 38/41 | 28/31 | 51/54 | 37/40 | 19/20 | 13/14 |
| Air capacity | m³/h | 2030/1685 | 2030/1685 | 1960/1610 | 1960/1610 | 1885/1530 | 1885/1530 | 3110/2580 | 3110/2580 |
| Sound pressure level | dB(A) | 56/47 | 56/47 | 56/47 | 56/47 | 56/47 | 56/47 | 61/53 | 61/53 |
| Heating medium connection | Inch | R1" | R1" | R1" | R1" | R1" | R1" | R1" | |
| Voltage supply | V/Hz | 400/3~N/50 | | | | | | | |
| Weight | kg | 31 | | 35 | | 38 | | 32 | |
| Ref. no. | | 1687101 | | 1687102 | | 687103 | | 1687201 | |
| **Switchgear** | | | | | | | | | |
| Switchgear MSRD 4.0, 2-stage, 400 V | | 1686200 | | 1686200 | | 1686200 | | 1686200 | |
| MSRD-K switchgear, 2-speed, 400 V | | 1686201 | | 1686201 | | 1686201 | | 1686201 | |
| MAK-2 switchgear, 2-speed, 400 V, completely electronic fittings for automatic operation including 24-hour temperature regulation | | 385330 | | 385330 | | 385330 | | 385330 | |
| Switchgear 3 EG, 5-stage, 3.0 A, 400 V | | 385300 | | 385300 | | 385300 | | 385300 | |
| Switchgear 5 EG, 5-stage, 5.2 A, 400 V | | 385301 | | 385301 | | 385301 | | 385301 | |
| Motor terminal box AKG-5, for parallel control of max. 5 units | | 385303 | | 385303 | | 385303 | | 385303 | |
| **Accessories** | | | | | | | | | |
| Unit brackets, fixed length 90 mm | | | Series | | Series | | Series | | Series |
| Unit brackets, adjustable, 90-145 mm | | 1687400 | | 1687400 | | 1687400 | | 1687400 | |

| **Other accessories** | | | | |
|---|---|---|---|---|
| Moisture-proof room thermostat, **Type RT-1**, IP 54, without connection accessories | 1011240 | 1011240 | 1011240 | 1011240 |
| Electronic moisture-proof room thermostat, **Type ETR-1**, with display, IP 54 protection class, without connection accessories | 1011241 | 1011241 | 1011241 | 1011241 |
| Electronic temperature controller, **Type ATR-4**, with temperature probe, surface mounting, IP 20 protection class | 1011340 | 1011340 | 1011340 | 1011340 |
| Electronic temperature controller, **Type ATR-7**, with temperature probe, surface mounting, IP 54 protection class | 1011292 | 1011292 | 1011292 | 1011292 |
| Temperature probe set for 4-point blended temperature | 1011343 | 1011343 | 1011343 | 1011343 |

## REMKO PWL

### Modern technology in an attractive design

REMKO's PWL series ceiling-mounted air units combine the latest technology with an attractive design. Their flat design and variable technology allows their subtle application, both in low-ceilinged and high-ceilinged rooms. The individually adjustable fins in the upper and lower parts of the housing allow optimal air distribution and thus provide a comfortable room climate. Their use in salesrooms or other customer areas is possible thanks to their low sound pressure level and their fine design. Ease of service and a simple, uncomplicated assembly are the characteristic features of these units. The media connections and the mains cabling can be installed out of sight in the false ceiling. The elegant plastic housing can easily be removed from its bearing elements thanks to the rapid release couplings. PWL..HK series units are fitted as standard with a high-performance condensate pump.

### Areas of application

- Sales rooms
- Car dealerships
- Exhibition and reception rooms
- Exhibition halls
- Shopping centers
- Retail shops and supermarkets
- Large entry areas
- Trade areas
- Industrial halls

*Pleasant coolness with PWL... HK units used in combination with REMKO chillers. See the REMKO catalogue "Chillers."*

- Attractive design
- Quiet operation
- Installation-friendly construction
- Service-friendly
- Universal use
- Self-extinguishing plastic housing, fire class V-0

*Electronic temperature controller, ATR-7*

*Switchgear MSRD 4.0 2-speed*

| PWL 202 H | | PWL 203 H | | PWL 301 H | | PWL 302 H | | PWL 303 H | |
|---|---|---|---|---|---|---|---|---|---|
| 36.3 | | 47.2 | | 26.9 | | 44.0 | | 61.1 | |
| 90/70 | 70/50 | 90/70 | 70/50 | 90/70 | 70/50 | 90/70 | 70/50 | 90/70 | 70/50 |
| 36.3/32.3 | 26.6/23.7 | 47.2/41.4 | 34.5/30.4 | 26.9/20.3 | 18.8/14.3 | 44.0/31.5 | 31.0/22.3 | 61.1/34.7 | 44.8/25.6 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35/37 | 25/27 | 46/49 | 34/36 | 17/21 | 12/15 | 29/36 | 21/26 | 43/56 | 32/41 |
| 2900/2400 | 2900/2400 | 2850/2350 | 2850/2350 | 4300/2650 | 4300/2650 | 4150/2400 | 4150/2400 | 3900/1710 | 3900/1710 |
| 61/56 | 61/56 | 61/56 | 61/56 | 66/59 | 66/59 | 66/59 | 66/59 | 68/61 | 68/61 |
| R1" | R1" | R1" | R1" | R1" | R1" | R1" | R1" | R1" | R1" |
| 400/3~N/50 | | | | | | | | | |
| 35 | | 38 | | 43 | | 46 | | 48 | |
| 1687202 | | 1687203 | | 1687301 | | 1687302 | | 1687303 | |
| 1686200 | | 1686200 | | 1686200 | | 1686200 | | 1686200 | |
| 1686201 | | 1686201 | | 1686201 | | 1686201 | | 1686201 | |
| 385330 | | 385330 | | 385330 | | 385330 | | 385330 | |
| 385300 | | 385300 | | 385300 | | 385300 | | 385300 | |
| 385301 | | 385301 | | 385301 | | 385301 | | 385301 | |
| 385303 | | 385303 | | 385303 | | 385303 | | 385303 | |
| Series | | Series | | Series | | Series | | Series | |
| 1687400 | | 1687400 | | 1687400 | | 1687400 | | 1687400 | |
| 1011240 | | 1011240 | | 1011240 | | 1011240 | | 1011240 | |
| 1011241 | | 1011241 | | 1011241 | | 1011241 | | 1011241 | |
| 1011340 | | 1011340 | | 1011340 | | 1011340 | | 1011340 | |
| 1011292 | | 1011292 | | 1011292 | | 1011292 | | 1011292 | |
| 1011343 | | 1011343 | | 1011343 | | 1011343 | | 1011343 | |

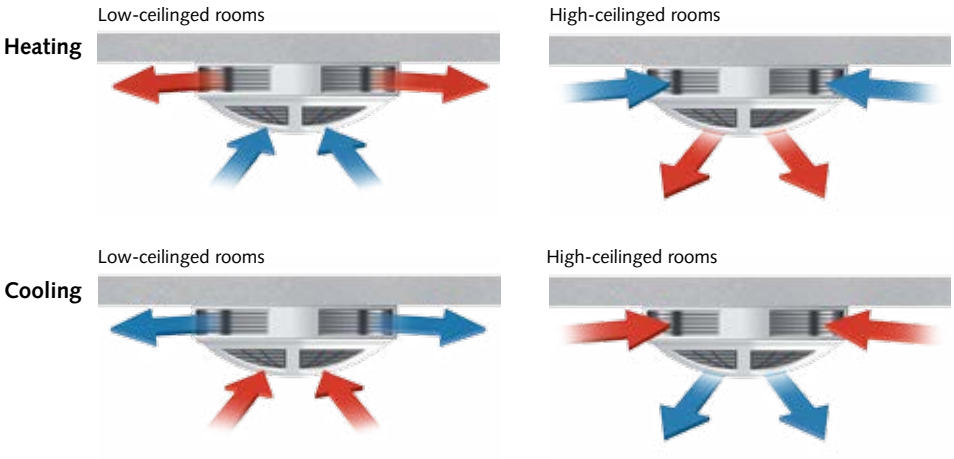
# CEILING VENTILATION UNIT

## *PWL...H series*

### Mounting examples

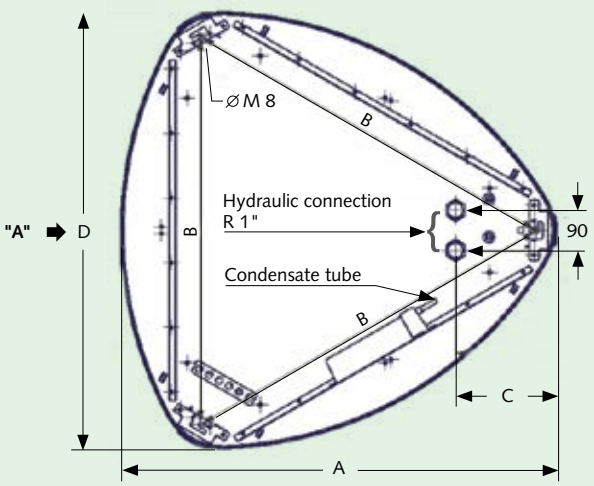
**Versatile**

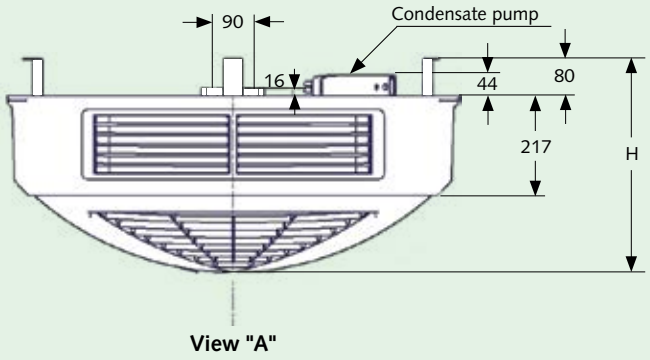
The possibility of altering the rotation of the fans allows optimal air distribution in both low-ceilinged and high-ceilinged rooms. In addition, this technology is ideal for always achieving the perfect outlet layout for heating and cooling operations.




**Technical details and planning aids can be found in the operating instructions (as PDF file) under: www.remko.de > Download**

### Dimensions




**NOTE**

*The inlet and return flows can be connected as required.*

**Mounting distance between unit and ceiling minimum 80 mm!**

| Dimensions | PWL 101-103 HK | PWL 201-203 HK | PWL 301-303 HK |
|---|---|---|---|
| A | 985 mm | 1084 mm | 1178 mm |
| B | 632 mm | 963 mm | 1043 mm |
| C | 229 mm | 229 mm | 229 mm |
| D | 989 mm | 1073 mm | 1160 mm |
| H | 400 mm | 485 mm | 504 mm |

We reserve the right to make changes to dimensions and the design in the interest of technical advances.

# CEILING HEATING SYSTEMS

## *WPS Series – The sun above your workstation*

**REMKO WPS**

**The "heat island principle":**
**Heat where it is needed**

REMKO ceiling heating systems create new dimensions in the heating of production lines, warehouses, sports halls, sports stands, sales rooms, exhibition halls, etc.

In accordance with the "heating island principle," REMKO ceiling-mounted heating systems can be used to heat areas such as workplaces, cash till areas, individual components, materials, audience seats, sales areas, and so on.

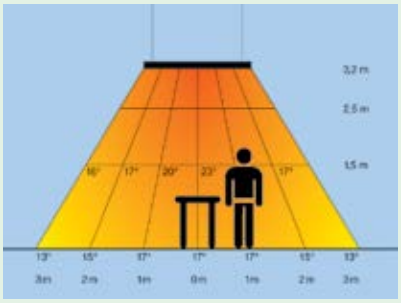
**The sun above your workstation**

REMKO ceiling heating systems generate soft waves of heating in accordance with the principle of solar heating. Not the air is heated, but rather only the radiated surface. There are only slight temperature differences between the floor and the hall ceiling. The cosy heating of the floor area prevents cold feet and increases motivation.

**REMKO ceiling heating systems for mounting directly above the useful or working area**

The installation above the working area should ideally be at a suspended height of 3.20 m, using a suspension bracket. Integrated installation into a false ceiling is also possible, as is mounting under a cable duct. An additional advantage of the REMKO ceiling heating systems are their universal application possibilities. When large useful or working areas are heated, it is possible to install several heating systems in series in a modular manner. The time-consuming and expensive installation of an exhaust gas system is not necessary. REMKO ceiling heating systems are maintenance-free.


*Switch box for remote control ref. no. 412100*



*Temperature data based on a room temperature of 12°C (WPS 3000)*

**Technical data**

| Series | | WPS 2000 | WPS 3000 |
|---|---|---|---|
| Usage area | approx. m | 6 x 4 | 6 x 4 |
| Heat range | | See temperature profile | |
| Voltage supply | V/Hz | 230/1~/50 | |
| Power consumption | kW | 2.2 | 2.4 |
| Rated current | A | 9.8 | 10.9 |
| Minimum mounting height | m | 2.50 | 2.50 |
| Length | mm | 2000 | 2000 |
| Width | mm | 300 | 300 |
| Height | mm | 80 | 80 |
| Weight | kg | 22 | 22 |
| Serial colour | | white | white |
| Ref. no. | | 1640200 | 410100 |
| **Accessories** | | | |
| Suspension assembly consisting of: 2 mounting brackets for ceiling mounting or mounting under a cable duct, 2 suspension chains at 3.5 m each, 2 ceiling hooks with dowels | | Included in price | Included in price |
| Switchgear for remote control with on/off switch and built-in room thermostat, for 1 heating system | | 412100 | 412100 |
| Switchgear with on/off switch and room thermostat connection, can be used for 2-6 heating systems | | 412200 | 412200 |

| Other accessories | | |
|---|---|---|
| Moisture-proof room thermostat, **Type RT-1**, IP 54, without connection accessories | 1011240 | 1011240 |
| Electronic moisture-proof room thermostat, **Type ETR-1**, with display, IP 54 protection class, without connection accessories | 1011241 | 1011241 |

# CEILING FANS

## *DVL and ATR series*
## *The ideal supplement to hot air heating systems*

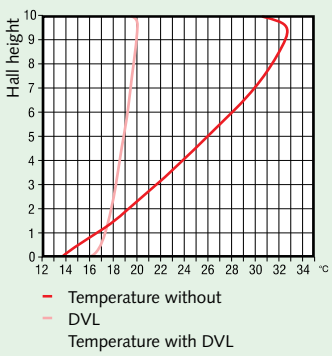
### REMKO DVL

**Ceiling fans for reducing energy costs by activating lost ceiling heat in high-ceilinged halls**

Thermal dynamic pushes heat upward.
Result: Unused quantities of heat dam up near the ceiling. With the REMKO DVL 140 ceiling fan, this lost heat potential can be retrieved from the ceiling and returned to the work area. Valuable thermal energy is saved by this type of "heat recovery."

- High ventilation capacity
- Long service life
- Quiet operation
- Low energy costs
- Single-phase a.c. motor, maintenance-free and malfunction-free for continuous operation
- White housing, stove enamelled
- Vibration-damping pendulum pipe suspension for low-vibration operation
- Easy to assemble
- Adjustable rotation speed, optional

**Energy savings up to 30%**




**Layout of the ceiling fans**

The layout of the ceiling fans needs to take the structural conditions into consideration. The following formulas are approximation formulas. The maximum hall height of 14 m must not be exceeded.

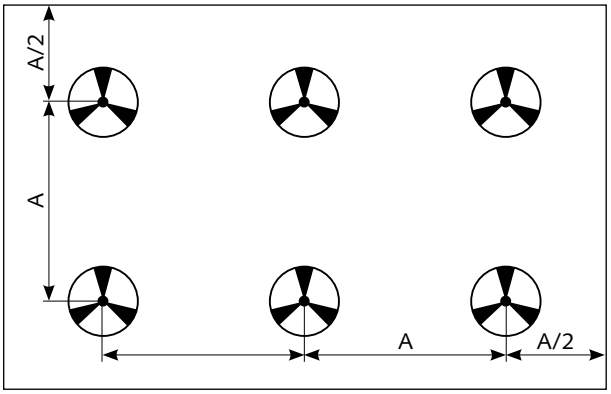
**Layout**

- Number of DVLs = $\frac{\text{Hall floor area}}{\text{Hall height x 20}}$
- Distance A of the DVL = $\sqrt{\text{Hall height x 20}}$

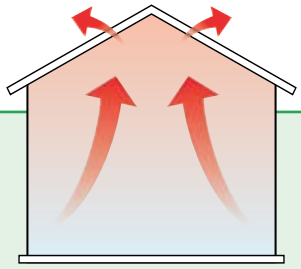
**Example**

- Hall 40 x 30 m, 10 m high
- Number of DVLs = $\frac{40 \times 30}{10 \times 20}$
  = **6 fans**
- Distance A of the DVL = $\sqrt{10 \times 20}$
  = **14.14 meters**

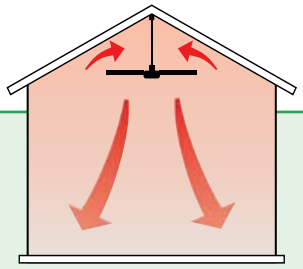
# TEMPERATURE CONTROLLER




***Important mounting instructions:*** *The Unfallverhütungs-vorschriften (German Accident Prevention Regulations (UVV)) proscribe a mandatory minimum distance of 2.5 m from the floor to the bottom edge of the blade.*



*Based on the natural lift of hot air the most part of the heating energy remains under the ceiling.*



*Through the use of a DVL ceiling fan, the hot air will be pushed downwards evenly.*

## REMKO ATR-3

**Fully automatic differential temperature controller, the ideal complement to a ceiling fan**

With the fully automatic differential temperature controller, hot air that rises to the ceiling is made usable again in connection with the REMKO ceiling fan. The controller works with two probes: a room probe attached at working height and a ceiling probe. If a previously set value is undershot, the ceiling fans are switched on in order to transport the hot air from the ceiling area back downward.

- Optimally tuned
- Simple to operate
- Exact regulation range
- Digitally programmable

**Energy savings calculation**

- $\frac{\Delta t \text{ mit DVL}}{\Delta t \text{ ohne DVL}}$ $\quad \frac{18 - (-12) + 1.5}{18 - (-12) + (10 \times 1.5)}$
- $\frac{\Delta t + 1{,}5}{\Delta t + (H \times 1{,}5)}$ $\quad \frac{31.5}{45}$

$\Delta t$ = Rauminnentemperatur – Normaußentemperatur

**Example**

- 18°C indoor temperature
- –12°C standard outdoor temperature
- 10 m high hall

**Technical data**

| Ceiling fans | | DVL 140 | DVL140 K* |
|---|---|---|---|
| Air circulation | m³/h | 15,000 | |
| Max. speed | rpm | 300 | |
| Voltage supply | V/Hz | 230/1~/50 | |
| Power consumption | Watt | 75 | |
| Blade diameter | mm | 1,420 | |
| Construction height | mm | 690 | 440 |
| Weight | kg | 9.5 | 9.0 |
| Ref. no. | | 570400 | 570401 |
| **Differential temperature controller with display, Type TR-2**, incl. temperature probe, IP 54 protection class, max. 10 units | | **TR-2** | **TR-2** |
| Ref. no. | | 1011291 | 1011291 |
| **Fully automatic, differential temperature controller Type ATR-3**, including temperature probe, weekly programme, IP 54 protection class maximum 14 units | | **ATR-3** | **ATR-3** |
| Ref. no. | | 1011290 | 1011290 |
| **Other accessories** | | | |
| Thermal probe for fully-automatic operation through ceiling temperature monitoring | 1011230 | | |
| Speed controller, infinitely variable, **Type DR-1**, max. 4 units | 1011294 | | |
| Speed controller, infinitely variable, **Type DR-3**, max. 8 units | 1011296 | | |

*Short design

# EXHAUST GAS SYSTEMS

## *ASE and ASD series Universally usable stainless steel exhaust gas systems*

**REMKO ASE and ASD**

**The ideal exhaust gas solution**

The REMKO ASE and ASD exhaust gas systems are especially designed for connection to modern hot air heating systems. The modular ASD systems with their three-shell design are delivered ready for assembly with continuous ceramic rock wool insulation. For reasons of corrosion protection, all components are basically manufactured from stainless steel. The exhaust gas system parts are simply connected by plugging and secured using clamps.

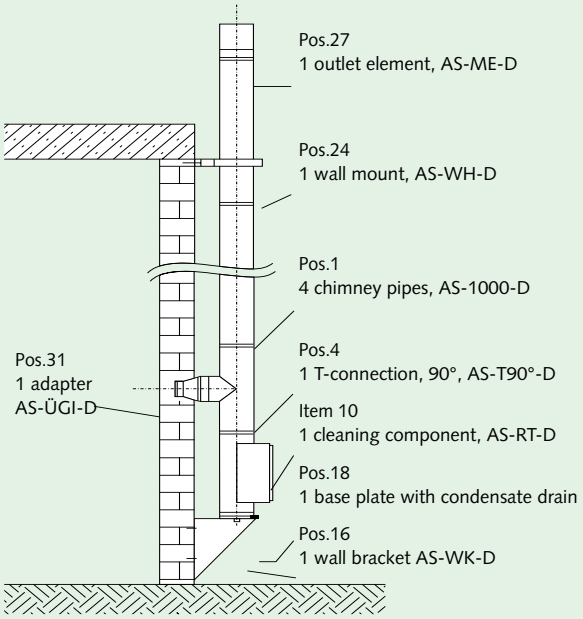
- Easy planning
- Optimum heat insulation
- High security
- Modular design
- Easy and economical mounting and design
- Condensate-proof implementation with seam plasma welding
- Simple double-casing plug-in technology
- Outer casing made of stainless steel 1.4301
- Official tests, including: Corrosion resistance, pressure resistance, mounting safety, and temperature resistance

**Technical data**

| Single-walled stainless steel | Series | ASE |
|---|---|---|
| Material: | Inner wall | 1.4404 |
| | Wall thickness | 0,6 mm |
| Insulation | | possible |
| Thickness | | 25 mm |
| Internal rated diameter range | | Ø 130 – 200 mm |
| Temperature range | Continuous mode | 400 °C |
| Max. testing temperature | | 1000 °C ± 50 K |
| Function | | dry, vacuum |
| Fuels | | Oil/gas |
| Approval | | CE 0432-BPR-119988 |
| Quality/external monitoring | | Yes |

| | Series<br>Interior rated length range mm | ASE 130<br>130 Ø | | ASE 150<br>150 Ø | | ASE 180<br>180 Ø | | ASE 200<br>200 Ø | |
|---|---|---|---|---|---|---|---|---|---|
| Pos. | **Individual sections** | Ref. no. | € | Ref. no. | € | Ref. no. | € | Ref. no. | € |
| 1 | Chimney pipe AS-1000-E | 1085325 | | 1085326 | | 1085327 | | 1085328 | |
| 2 | Chimney pipe AS-500-E | 1085336 | | 1085337 | | 1085338 | | 1085339 | |
| 3 | Chimney pipe, AS-250-E | 1085740 | | 1085741 | | 1085742 | | 1085743 | |
| 4 | T-connection AS-T90-E | 1085347 | | 1085348 | | 1085349 | | 1085350 | |
| 5 | T-connection AS-T45-E | 1085370 | | 1085371 | | 1085372 | | 1085373 | |
| 6 | Pipe bend AS-B45-E | 1085490 | | 1085491 | | 1085492 | | 1085493 | |
| 7 | Cleaning bend, adjustable 0-90°, AS-RB90-E | 1085436 | | 1085437 | | 1085438 | | 1085439 | |
| 8 | Cleaning component with condensate drain, AS-RT-E | 1085424 | | 1085425 | | 1085426 | | 1085427 | |
| 9 | Rain hood AS-RH-E | 1085479 | | 1085480 | | 1085481 | | 1085482 | |
| 10 | Wall mount, adjustable AS-WH-E | 1085567 | | 1085568 | | 1085569 | | 1085570 | |
| 11 | Roof penetration 1-15° incl. weather collar AS-D15-E | 1085750 | | 1085751 | | 1085752 | | 1085753 | |
| 12 | Roof penetration 15-30° incl. weather collar AS-D30-E | 1085760 | | 1085761 | | 1085762 | | 1085763 | |
| 13 | Adjusting length AS-JL-E | 1085739 | | 1085770 | | 1085771 | | 1085772 | |
| 14 | Reduction piece 130/150 mm | 1085290 | | | | | | | |

**REMKO ASD**
**Exhaust gas system, complete,**
**for exterior assembly, consisting of:**




## Technical data

| Double-walled stainless steel | Series | ASD |
|---|---|---|
| Material: | Inner wall | 1.4404 |
| | Wall thickness | 0,4 mm |
| | Outside wall | 1.4301 |
| | Wall thickness | 0,4 mm |
| Insulation | | Mineral wool |
| Thickness | | 35 mm |
| Internal rated diameter range | | Ø 130 – 350 mm |
| Temperature range | Continuous mode | 600 °C |
| Max. testing temperature | | 1,000°C ± 50 K |
| Function | | Moist and dry, vacuum |
| Fuels | | Oil/gas, solid fuels |
| CE Certificate No. | | CE 0432-BPR-119900 |
| Quality/external monitoring | | Constant monitoring |

| | Series | ASD 130 | ASD 150 | ASD 180 | ASD 200 | ASD 300 | ASD 350 |
|---|---|---|---|---|---|---|---|
| | Exhaust gas system, complete, for outside mounting | 130 Ø | 150 Ø | 180 Ø | 200 Ø | 300 Ø | 350 Ø |
| | Ref. no. | 1085354 | 1085355 | 1085360 | 1085375 | 1085390 | 1086395 |
| | Application possibility of series ** | GPM 15-55 | VRS 25-50, GPM 75 | VRS 75-100 | VRS 130-200 | VRS 270-340 | VRS 440-540 |
| Pos. | **Individual sections** | Ref. no. | Ref. no. | Ref. no. | Ref. no. | Ref. no. | Ref. no. |
| 1 | Chimney pipe AS-1000-D | 1085000 | 1085001 | 1085002 | 1085003 | 1085005 | 1086006 |
| 2 | Chimney pipe AS-500-D | 1085007 | 1085008 | 1085009 | 1085010 | 1085012 | 1086013 |
| 3 | Chimney pipe, AS-250-D | 1085013 | 1085015 | 1085016 | 1085017 | 1085019 | 1086020 |
| 4 | T-connection AS-T90°-D | 1085020 | 1085022 | 1085023 | 1085024 | 1085026 | 1086027 |
| 5 | T-connection AS-T45°-D | 1085028 | 1085029 | 1085030 | 1085031 | 1085033 | 1086034 |
| 6 | Pipe bend, AS-B45°-D | 1085034 | 1085036 | 1085037 | 1085038 | 1085040 | 1086041 |
| 7 | Pipe bend, AS-B30°-D | 1085041 | 1085043 | 1085044 | 1085045 | 1085047 | 1086048 |
| 8 | Pipe bend, AS-B15°-D | 1085048 | 1085050 | 1085051 | 1085052 | 1085054 | 1086055 |
| 9 | Cleaning joint, AS-RB90°-D | 1085722 | 1085724 | 1085725 | 1085726 | 1085728 | 1086729 |
| 10 | Cleaning component, AS-RT-D | 1085055 | 1085057 | 1085058 | 1085059 | 1085061 | 1086062 |
| 11 | Adjusting length AS-JL-D | 1085069 | 1085071 | 1085072 | 1085073 | 1085075 | 1086076 |
| 12 | Floor support, adjustable AS-BS-D | 1085076 | 1085078 | 1085079 | 1085080 | 1085082 | 1086083 |
| 13 | Intermediate bracket AS-ZK-D | 1085090 | 1085092 | 1085093 | 1085094 | 1085096 | 1086097 |
| 14 | Roof support, adjustable AS-DS-D | 1085111 | 1085113 | 1085114 | 1085115 | 1085117 | 1086118 |
| 15 | Ceiling guide sleeve AS-DF-D | 1085314 | 1085316 | 1085317 | 1085318 | 1085321 | 1086322 |
| 16 | Wall bracket AS-WK-D | 1085104 | 1085106 | 1085107 | 1085108 | 1085110 | 1086111 |
| 18 | Base plate AS-GI-D | 1085125 | 1085127 | 1085128 | 1085129 | 1085131 | 1086132 |
| 19 | Sealing cover, AS-VD-D | 1085174 | 1085176 | 1085177 | 1085178 | 1085180 | 1086181 |
| 20 | Roof penetration AS-D15-D, 1-15° | 1085149 | 1085151 | 1085152 | 1085153 | 1085155 | 1086156 |
| 21 | Roof penetration, AS-D30-D, 15-30° | 1085139 | 1085141 | 1085142 | 1085143 | 1085145 | 1086146 |
| 22 | Roof penetration, AS-D45-D, 30-45° | 1085160 | 1085162 | 1085163 | 1085164 | 1085166 | 1086167 |
| 24 | Wall mount AS-WH-D | 1085209 | 1085211 | 1085212 | 1085213 | 1085215 | 1086216 |
| 25 | Wall mount, adjustable AS-WHV-D | 1085673 | 1085675 | 1085676 | 1085677 | 1085679 | 1086680 |
| 27 | Outlet element, AS-ME-D | 1085251 | 1085253 | 1085254 | 1085255 | 1085257 | 1086258 |
| 28 | Rain cover, AS-RH-D | 1085258 | 1085260 | 1085261 | 1085262 | 1085264 | 1086265 |
| 29 | Guy clamp, AS-AS-D | 1085279 | 1085281 | 1085282 | 1085283 | 1085285 | 1086286 |
| 31* | Adapter AS-ÜGI-D | 1085640 | 1085642 | 1085643 | 1085644 | 1085646 | 1086647 |
| 32 | Adapter AS-ÜE-D | 1085132 | 1085134 | 1085135 | 1085136 | 1085138 | 1086139 |
| 33 | Testing element AS-PE-D | 1085701 | 1085703 | 1085704 | 1085705 | 1085707 | 1086708 |
| 34 | Drain pipe AS-EW-D | 1085710 | 1085712 | 1085713 | 1085714 | 1085716 | 1086717 |
| 35 | Replacement securing tape AS-SB-D | 1085196 | 1085197 | 1085198 | 1085199 | 1085201 | 1086202 |
| 36 | Replacement weather collar AS-WK-D | 1085237 | 1085239 | 1085240 | 1085241 | 1085243 | 1086244 |
| 37 | Wall mount, adjustable up to 300 mm, AS-WHV 300-D | 1085680 | 1085681 | 1085682 | 1085683 | 1085685 | 1086686 |
| 38 | Wall mount, adjustable up to 600 mm, AS-WHV 600-D | 1085690 | 1085691 | 1085692 | 1085693 | 1085695 | 1086696 |
| 39 | Wall bracket, adjustable up to 300 mm, AS-WKV 300-D | 1085720 | 1085720 | 1085720 | 1085720 | 1085721 | 1086722 |
| 40 | Wall bracket, adjustable up to 600 mm, AS-WKV 600-D | 1085721 | 1085721 | 1085721 | 1085721 | 1085723 | 1086724 |
| 41 | Chimney connector component, GPM, 2-piece, AS-KA-D | 1085730 | 1085735 | | | | |

* AS-ÜGI-D is used as a boiler connector component. All construction components are delivered with their securing straps.
** A cross-section calculation according to DIN 4705 is fundamentally recommended.

# REMKO INTERNATIONAL

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