

# Drawing heating energy from the ground

- › Cover your own demand for heating and hot water with geothermal energy



# STIEBEL ELTRON is full of energy

As a family company driven by innovation, throughout product development and manufacture we maintain a clear focus on environmentally responsible, efficient and convenient building services for your home. Because we're full of energy and ready to shape the future!

**The future belongs to  
environmentally responsible and  
efficient building services.**

Since 1924 we have been developing highly efficient products and maintain a clear focus on electricity as our primary energy source. Electricity which, nowadays, is increasingly obtained from renewables.

We rely on approximately 3700 employees around the world and their expertise at every stage of development – from the initial design, right through to the manufacture of the final product. The result – efficient and innovative solutions for domestic hot water, heat, ventilation and cooling. With our extensive product range, we always have the right option to help you prepare your home for the demands of the future – today.

At our head office in Holzminden, Germany, we have also established a clear focus on green technology – with the Energy Campus, our flagship project for sustainable construction which makes careful use of resources. This training and communication centre brings together high quality architecture and communication technology. And as a Plus Energy building, it generates more energy than it consumes. This is in keeping with our brand promise “Full of energy” and creates a space where the spirit of STIEBEL ELTRON can be experienced both in theory and practice.



# Electricity – the energy source of the future

Renewable energies will become the norm for our future energy supply as more and more people recognise the benefits of green and self-generated power from renewable sources.

## **The goal of the energy transition is independence from fossil fuels**

Fossil fuels are in decline on the electricity market – too harmful to the climate and ever more scarce. Nowadays, alternative energies using the sun, wind and water are being used to generate green power.

So it is only logical to act in good time to convert the largest energy consumer in your home – the heating system – to these futureproof forms of energy. As nearly 80 % of energy consumed in the home is used for heating and hot water, this makes perfect sense. So there is plenty of scope for implementing the energy transition in your own home.



# Comfortable in both winter and summer

Pleasant temperatures have a positive influence on our wellbeing and performance. After all, a healthy room climate is not merely a comfort factor, but an important necessity. In fact, there is only a relatively narrow temperature range in which people feel consistently comfortable and perform well.

Pleasant temperatures all year round

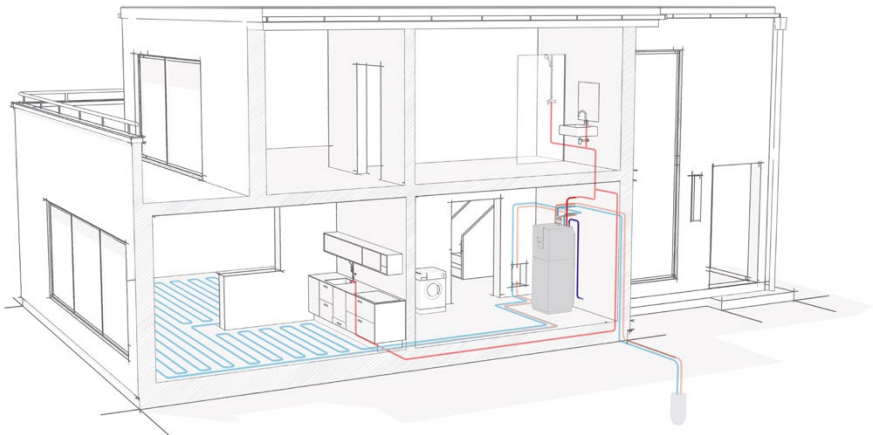
- › improve cognitive performance
- › increase wellbeing



# Cooling with the heating system – how exactly does that work?

In the cold months of the year, the heating water heated by the heat pump circulates in the underfloor heating system. A heat pump with cooling function is the only heat generator that can also cool this heating water. It allows pleasantly cool “heating water” to flow through your underfloor heating system, which lowers the room temperature.

Since no cool air is blown into the room, as is the case with air conditioning, there is no draught and no disruptive noise.



Heat pumps for cooling include the WPF cool and WPC cool ground source heat pumps

A distinction is made between two methods in ground source heat pumps with cooling function

| PASSIVE COOLING  | ACTIVE COOLING*   |
|--|---|
| With passive cooling, the low temperature of the groundwater or ground is transferred to the heating system via a heat exchanger | With active cooling, the cooling capacity of the heat pump is transferred to the heating system |
| The heat pump compressor is not switched on, i.e. the heat pump remains “passive”  | The heat pump compressor is switched on, i.e. the heat pump is “active”                         |
| This allows cooling to be implemented at minimum cost  | Higher cooling capacities can be achieved with active cooling                                   |

\* Additional components required on site.









“We harvest an impressive amount from our garden already: wholesome herbs, fresh vegetables, and beautiful flowers. The most amazing thing is that we can keep on reaping richly all through the winter. This is because our ground source heat pump draws thermal energy from the ground for heating and hot water throughout the year.”

# Exploiting the heat potential of your property

Even when it's freezing outside, temperature levels remain steady deep below the ground. Our advanced ground source heat pumps exploit this phenomenon and are among the few that achieve a COP\* of up to 5. Even at temperatures below 0 °C, from one part electricity they still generate up to five parts heat. Since probes go deep underground, the space taken up by the drilled holes on the surface is minimal.

## GROUND SOURCE HEAT PUMPS

|  | Page 08   | Page 10   | Page 12   | Page 14  | Page 16   | Page 17   |
|--|---|---|---|--|---|---|
|  |  |  |  |  |  |  |
|  | PREMIUM   |   |   | PLUS   | TREND   |   |
| Model  | WPF (S)<br>WPF cool   | WPC (S)<br>WPC cool   | WPE-I 33-87<br>H 400<br>Premium   | WPF 20-66<br>WPF 27 HT   | WPF M   | WPF basic   |
| Energy efficiency class, W55/W35                   | A++/A+++  | A++/A+++  | A+++/A+++   | A++/A+++   | A+++/A+++ <sup>3)</sup>   | A+/A+++   |
| Detached and two-family house   apartment building | ■   ■   | ■   -   | -   ■   | ■   ■  | ■   ■   | ■   ■   |
| Non-residential building                           |   |   | ■   | ■  | ■ <sup>1)</sup>   | ■   |
| New build   modernisation                          | ■   ■   | ■   ■   | ■   ■   | ■   ■  | ■   ■   | ■   ■   |
| ISG-capable   option for:                          | ■   | ■   | ■   | ■  | ■   | ■   |
| - on-site PV power consumption**                   | ■   | ■   | ■   | ■  | ■   | ■   |
| - mobile control**                                 | ■   | ■   | ■   | ■  | ■   | ■   |
| Heating   cooling                                  | ■   ■ <sup>2)</sup>   | ■   ■ <sup>2)</sup>   | ■   -   | ■   -  | ■   -   | ■   -   |
| Integral DHW cylinder                              |   | ■   |   |  |   |   |
| Indoor   outdoor installation                      | ■   -   | ■   -   | ■   -   | ■   ■  | ■   -   | ■   -   |
| Can be combined with other heat generators         |   |   | ■   | ■  | ■   | ■   |

\*Coefficient of performance – measure of heat pump efficiency. <sup>1)</sup>WPF Set (S) only <sup>2)</sup>Cool version only <sup>3)</sup>WPF 13 M only

\*\*For system and country-specific compatibility and availability, please see the information at: [www.stiebel-eltron.de/iotcompatibility](http://www.stiebel-eltron.de/iotcompatibility)



# WPF (cool)

## TOP EFFICIENCY AND ALL IMPORTANT COMPONENTS INCLUDED

The powerful output of the WPF supplies your home efficiently with heat and hot water. In addition, it can be combined with any DHW cylinder from the STIEBEL ELTRON product range. Fitted with every important component, the heat pump comes already highly integrated, enabling quick and easy installation.

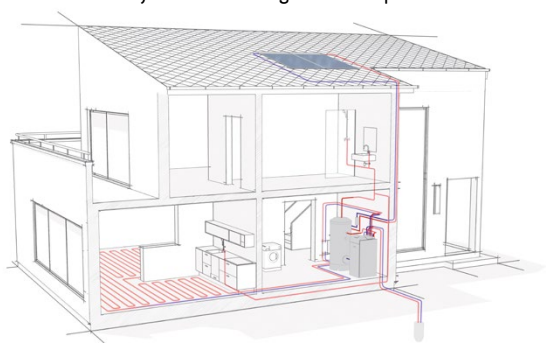
### Stylish design, easy to operate

The unit is controlled by the advanced heat pump manager. The touch-sensitive Touch-Wheel plus display facilitates quick and intuitive operation.



### Heats in winter, cools in summer – and always highly efficient

The WPF heat pump is also available in a cool version with integrated passive cooling for even greater comfort in your home. The geothermal probe is also used in summer for cooling purposes.



### Benefits for your home

- › Heat pump installed indoors for heating and cooling\*
- › Exemplary efficiency for low energy bills
- › Extremely quiet operation due to advanced acoustic separation
- › Powerful performance, therefore also suitable for larger buildings
- › High level of DHW convenience thanks to high flow temperatures of up to 65°C



| Model   | PLUS                      |                           |                           |                           |                           |                           |             |             |             |             |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-------------|-------------|-------------|-------------|
|   | WPF 04/<br>WPF 04<br>cool | WPF 05/<br>WPF 05<br>cool | WPF 07/<br>WPF 07<br>cool | WPF 10/<br>WPF 10<br>cool | WPF 13/<br>WPF 13<br>cool | WPF 16/<br>WPF 16<br>cool | WPF<br>05 S | WPF<br>07 S | WPF<br>10 S | WPF<br>13 S |
|   | 232909/<br>232915         | 232910/<br>232916         | 232911/<br>232917         | 232912/<br>232918         | 232913/<br>232919         | 232914/<br>232920         | 232922      | 232923      | 232924      | 232925      |
|   | A++/                      | A++/                      | A++/                      | A++/                      | A++/                      | A++/                      | A++/        | A++/        | A++/        | A++/        |
| Energy efficiency class                         | A+++                      | A+++                      | A+++                      | A+++                      | A+++                      | A+++                      | A+++        | A+++        | A+++        | A+++        |
| Output at B0/W35 (EN 14511)                     | kW 4,77                   | 5,82                      | 7,50                      | 10,31                     | 13,21                     | 17,02                     | 5,88        | 7,61        | 10,31       | 13,01       |
| COP at B0/W35 (EN 14511)                        | 4,5                       | 4,8                       | 4,84                      | 5,02                      | 4,82                      | 4,54                      | 4,78        | 4,75        | 4,76        | 4,75        |
| SCOP (EN 14825)                                 | 4,925                     | 5,325                     | 5,325                     | 5,6                       | 5,275                     | 4,925                     | 5,225       | 5,3         | 5,2         | 5,175       |
| Cooling capacity at B15/W23                     | kW -/3                    | -/3,8                     | -/5,2                     | -/6                       | -/8,5                     | -/11                      |             |             |             |             |
| Sound power level (EN 12102)                    | dB(A) 43                  | 43                        | 47                        | 48                        | 49                        | 53                        | 43          | 47          | 48          | 49          |
| Sound pressure level at a distance of 1 m dB(A) | 32                        | 32                        | 33                        | 37                        | 39                        | 42                        | 32          | 43          | 43          | 39          |
| Max. application limit on the heating side      | °C 65                     | 65                        | 65                        | 65                        | 65                        | 65                        | 60          | 60          | 60          | 60          |
| Height  | mm 1319                   | 1319                      | 1319                      | 1319                      | 1319                      | 1319                      | 1319        | 1319        | 1319        | 1319        |
| Width   | mm 598                    | 598                       | 598                       | 598                       | 598                       | 598                       | 598         | 598         | 598         | 598         |
| Depth   | mm 658                    | 658                       | 658                       | 658                       | 658                       | 658                       | 658         | 658         | 658         | 658         |
| Weight  | kg 142                    | 144                       | 161                       | 168                       | 171                       | 185                       | 144         | 161         | 168         | 170         |

\*The cooling function is only integral to the cool versions. \*\*SG Ready with WPF and WPF cool only

# WPC (cool)

## COMPACT IN SIZE, EXEMPLARY IN EFFICIENCY

As one of the most efficient heat pumps available on the market, the WPC delivers satisfaction not only because of a COP of up to 5, but also because of its compact dimensions and high level of integration. The unit even incorporates a 200 litre DHW cylinder.

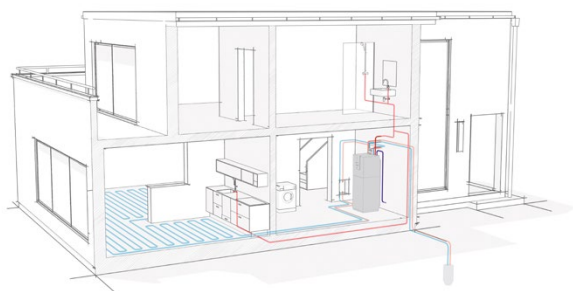
### Not just good looking

The integral heat pump manager complements the WPC's advanced design and provides for convenient operation with a backlit display and Touch-Wheel.



### Efficiency to enjoy on summer days

The cool version of the WPC utilises the constant underground temperature to ensure a comfortable interior, even during hot summers.



### Benefits for your home

- › Heat pump installed indoors for heating, DHW heating and cooling\*
- › Exemplary efficiency for low energy bills
- › Space benefit thanks to a compact, highly integrated solution
- › High level of DHW convenience thanks to high flow temperatures of up to 65 °C



|  | PLUS                      |                           |                           |                           |                           |              |              |              |              |
|--|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------------|--------------|--------------|--------------|
| Model  | WPC 04/<br>WPC 04<br>cool | WPC 05/<br>WPC 05<br>cool | WPC 07/<br>WPC 07<br>cool | WPC 10/<br>WPC 10<br>cool | WPC 13/<br>WPC 13<br>cool | WPC 05<br>S  | WPC 07<br>S  | WPC 10<br>S  | WPC 13<br>S  |
|  | 232926/<br>232931         | 232927/<br>232932         | 232928/<br>232933         | 232929/<br>232934         | 232930/<br>232935         | 232937       | 232938       | 232939       | 232940       |
| Energy efficiency class                              | A++/<br>A+++              | A++/<br>A+++              | A++/<br>A+++              | A++/<br>A+++              | A++/<br>A+++              | A++/<br>A+++ | A++/<br>A+++ | A++/<br>A+++ | A++/<br>A+++ |
| Energy efficiency class. DHW heating. load profile L | A                         | A                         | A                         | A                         | A                         | A            | A            | A            | A            |
| Output at B0/W35 (EN 14511)                          | kW 4.77                   | 5.82                      | 7.50                      | 10.31                     | 13.21                     | 5.88         | 7.61         | 10.31        | 13.01        |
| Coefficient of performance at B0/W35 (EN 14511)      | 4.5                       | 4.8                       | 4.84                      | 5.02                      | 4.82                      | 4.78         | 4.75         | 4.76         | 4.75         |
| SCOP (EN 14825)                                      | 4.925                     | 5.325                     | 5.325                     | 5.6                       | 5.275                     | 5.225        | 5.3          | 5.2          | 5.175        |
| Cooling capacity at B15/W23                          | kW -/3                    | -/3.8                     | -/5.2                     | -/6                       | -/8.5                     |              |              |              |              |
| Sound power level (EN 12102)                         | dB(A) 43                  | 45                        | 48                        | 49                        | 50                        | 45           | 48           | 49           | 50           |
| Sound pressure level at a distance of 1 m            | dB(A) 32                  | 32                        | 33                        | 37                        | 39                        | 32           | 33           | 37           | 39           |
| Max. application limit on the heating side           | °C 65                     | 65                        | 65                        | 65                        | 65                        | 65           | 65           | 65           | 65           |
| Height   | mm 1917                   | 1917                      | 1917                      | 1917                      | 1917                      | 1917         | 1917         | 1917         | 1917         |
| Width  | mm 600                    | 600                       | 600                       | 600                       | 600                       | 600          | 600          | 600          | 600          |
| Depth  | mm 703                    | 703                       | 703                       | 703                       | 703                       | 703          | 703          | 703          | 703          |
| Weight   | kg 243                    | 246                       | 259                       | 277                       | 283                       | 246          | 259          | 277          | 283          |
| Rated capacity                                       | l 175                     | 175                       | 175                       | 162                       | 162                       | 175          | 175          | 162          | 162          |

\*The cooling function is only integral to the cool versions.





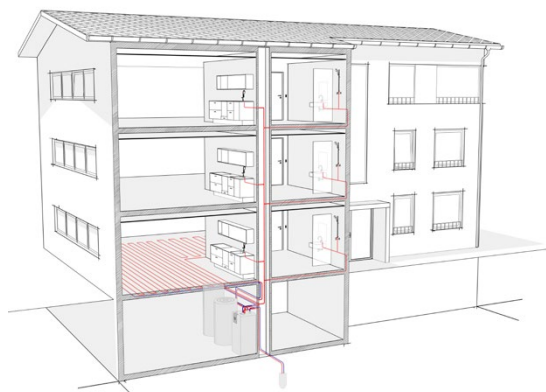
# WPE-I H Premium

## HEATING AND DHW ON A GRAND SCALE

The WPE-I H Premium heat pump provides not only heat in the building, but also DHW convenience. The cascade control can supply both apartment buildings and commercial properties. Thanks to inverter technology, the appliance is extremely versatile and can even be conveniently controlled via app\*.

### Quiet operation with a long service life

Thanks to its robust design, the WPE-I H Premium heat pump offers a level of reliability that enables it to meet high performance requirements on a long term basis. Despite this, the appliance is quiet to run. Operation is made easier thanks to the practical colour touchscreen.



### Benefits for your home

- › Heat pump installed indoors for heating and DHW heating\*\*
- › Inverter technology: precisely matched to the building's heat demand
- › Cascade control for powerful heating output
- › Outstanding DHW convenience
- › Convenient control via app\*
- › Very quiet operation



| Model                               | PREMIUM                |                        |                        |                        |
|-------------------------------------|------------------------|------------------------|------------------------|------------------------|
|                                     | WPE-I 33 H 400 Premium | WPE-I 44 H 400 Premium | WPE-I 59 H 400 Premium | WPE-I 87 H 400 Premium |
|                                     | 201412                 | 201413                 | 201414                 | 201415                 |
| Energy efficiency class             | A+++ / A+++            | A+++ / A+++            | A+++ / A+++            | A+++ / A+++            |
| Heating output at B0/W35 (min/max)  | kW 10 - 33             | 11 - 44                | 14 - 59                | 21 - 87                |
| Output at B0/W35 (EN 14511)         | kW 20.18               | 26.71                  | 35.60                  | 52.00                  |
| COP at B0/W35 (EN 14511)            | 4.73                   | 4.6                    | 4.5                    | 4.71                   |
| SCOP (EN 14825)                     | 5.55                   | 5.65                   | 5.19                   | 5.17                   |
| Sound power level (EN 12102)        | dB(A) 41-56            | 41-56                  | 46-61                  | 46-63                  |
| Max. application limit heating side | °C 65                  | 65                     | 65                     | 65                     |
| Height                              | mm 1723                | 1723                   | 1742                   | 1742                   |
| Width                               | mm 692                 | 692                    | 900                    | 900                    |
| Depth                               | mm 803                 | 803                    | 848                    | 848                    |
| Weight                              | kg 300                 | 300                    | 430                    | 550                    |

\*Only possible with ISG \*\*Possible with additional, external diverter valve

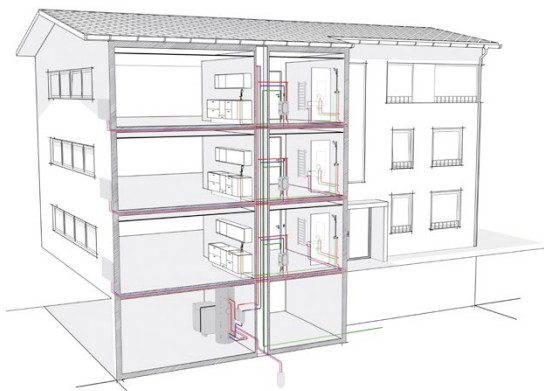
# WPF (HT)

## STACKABLE POWER PACKS

In cascading operation, these compact heat pumps achieve an output of up to 400 kW. To save space in the process, each pair can be installed piggyback. This efficient heating solution was specifically developed for larger residential complexes, as well as commercial and industrial buildings.

### A good combination – the perfect DHW solution

In combination with the WPF 20–27 in cascade control, the WPF 27 HT heat pump can be used very effectively for DHW heating. High flow temperatures up to +75 °C create high levels of DHW convenience. An integrated heat meter can calculate the amount of heating energy consumed at any time.



### Benefits for your home

- › Heat pump installed indoors or outdoors for heating
- › Specially developed for larger residential complexes, as well as commercial and industrial buildings
- › Potential for remote PC monitoring
- › Space savings as a result of stackability
- › Very quiet operation



reddot design award  
winner 2008

DESIGN PLUS

| PLUS                                       |                  |                  |                     |
|--|------------------|------------------|---------------------|
| Model                                      | WPF 20<br>233003 | WPF 27<br>233004 | WPF 27 HT<br>233009 |
| Energy efficiency class                    | A++/A+++         | A++/A+++         | A++/A+++            |
| Output at B0/W35 (EN 14511)                | kW 21.5          | 29.69            | 27.41               |
| COP at B0/W35 (EN 14511)                   | 4.66             | 4.85             | 4.34                |
| SCOP (EN 14825)                            | 5                | 5.28             | 4.58                |
| Sound power level (EN 12102)               | dB(A) 54         | 55               | 60                  |
| Sound pressure level at a distance of 1 m  | dB(A) 43         | 44               | 44                  |
| Max. application limit on the heating side | °C 60            | 60               | 75                  |
| Height                                     | mm 1154          | 1154             | 1154                |
| Width                                      | mm 1242          | 1242             | 1242                |
| Depth                                      | mm 860           | 860              | 860                 |
| Weight                                     | kg 345           | 367              | 409                 |



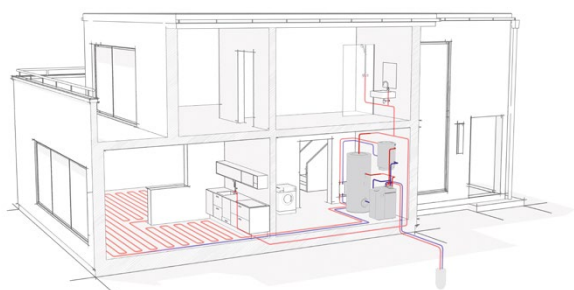
# WPF M

## TAILOR-MADE HEATING SOLUTIONS, LARGE AND SMALL

The universal application range of the WPF M is truly fascinating. It is small enough to provide an attractive solution for detached houses and powerful enough for larger tasks.

### WPF Set – twice as strong as a twin

Fully equipped with all essential components, such as control units and hydraulics, the WPF Set consists of two cascading WPF M heat pumps. The WPF Set has output levels that are particularly suitable for the commercial sector.



WPF M

## Benefits for your home

- › Heat pump installed indoors for heating
- › Three output sizes and options for cascading enable deployment almost anywhere
- › Up to 60°C heating flow temperature allows the use of traditional radiators
- › Very quiet operation

| Model                                      | TREND         |               |               |
|--|---------------|---------------|---------------|
|  | WPF 10 M      | WPF 13 M      | WPF 16 M      |
|  | <b>185349</b> | <b>182135</b> | <b>220894</b> |
| Energy efficiency class                    | A+/A+++       | A++/A+++      | A+/A+++       |
| Output at B0/W35 (EN 14511)                | kW 10.02      | 12.98         | 16.99         |
| COP at B0/W35 (EN 14511)                   | 4.49          | 4.57          | 4.35          |
| SCOP (EN 14825)                            | 5.075         | 5.125         | 4.875         |
| Sound power level (EN 12102)               | dB(A) 51      | 53            | 53            |
| Sound pressure level at a distance of 1 m  | dB(A) 40      | 40            | 45            |
| Max. application limit on the heating side | °C 60         | 60            | 60            |
| Height                                     | mm 960        | 960           | 960           |
| Width                                      | mm 510        | 510           | 510           |
| Depth                                      | mm 680        | 680           | 680           |
| Weight                                     | kg 112        | 120           | 125           |



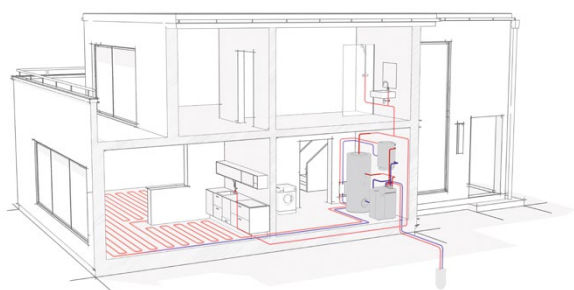
# WPF basic

## STANDARD VERSION – EFFICIENT HEATING TECHNOLOGY

Save money when saving energy – the affordable WPF basic series provides an ideal alternative to highly integrated ground source heat pumps. Featuring top STIEBEL ELTRON quality, the WPF basic is largely ready for installation. Thanks to its compact design, it can be perfectly adapted to meet structural conditions on site.

### Standard version in flexible solutions

The many different options for combining the WPF basic with cylinders from the STIEBEL ELTRON range allow it to be matched to many different demands.



WPF basic

### Benefits for your home

- › Heat pump installed indoors for heating
- › Compact standard version
- › Timeless design
- › Optimal energy use through an HE circulation pump with an energy efficiency class A rating

| Model                                      | TREND                  |                        |                        |
|--|------------------------|------------------------|------------------------|
|  | WPF 10 basic<br>230946 | WPF 13 basic<br>230947 | WPF 16 basic<br>230948 |
| Energy efficiency class                    | A+/A+++                | A+/A+++                | A+/A+++                |
| Output at B0/W35 (EN 14511)                | kW 9,7                 | 12,59                  | 16,64                  |
| COP at B0/W35 (EN 14511)                   | 4,37                   | 4,42                   | 4,16                   |
| SCOP (EN 14825)                            | 4,95                   | 4,925                  | 4,625                  |
| Sound power level (EN 12102)               | dB(A) 51               | 53                     | 53                     |
| Sound pressure level at a distance of 1 m  | dB(A) 40               | 42                     | 42                     |
| Max. application limit on the heating side | °C 60                  | 60                     | 60                     |
| Height                                     | mm 960                 | 960                    | 960                    |
| Width                                      | mm 510                 | 510                    | 510                    |
| Depth                                      | mm 680                 | 680                    | 680                    |
| Weight                                     | kg 120                 | 128                    | 131                    |



# Accessories

## DISCOVERING POSSIBILITIES

Our extensive range of accessories allows all our appliances to be adjusted to your personal requirements – for tailor-made comfort. These adaptations can range from the control unit of a single appliance to a complex system – STIEBEL ELTRON offers everything from a single source. For that reason, all components are perfectly matched to each other and guarantee a long service life for lasting solutions. For further information on our extensive range of accessories for your STIEBEL ELTRON products, see [www.stiebel-eltron.com](http://www.stiebel-eltron.com) or speak to your local trade partner.

### WPMsystem

#### Highly functional and modular

The system components combine functionality, extendibility and ease of installation. At the same time, they feature the attractive new STIEBEL ELTRON design and have significantly improved connections for the electrical installation components.

The WPM heat pump manager is the brains of the system and is able to regulate numerous functions via its integral programming unit. For larger demands, the WPM with the WPE extension

controller can be extended with additional functions, to enable the integration of a woodburning stove via a universal differential controller, for example.

The FET Touch-Wheel remote control enables the required room temperature to be controlled with great accuracy. The backlit graphic display shows the room temperature, relative humidity, time and outside temperature.



# We speak one language the world over: German engineering

STIEBEL ELTRON is a global company with German roots. We aim to impress with innovations and quality – worldwide. We are represented with six production facilities, 26 subsidiaries and agencies in over 120 countries.

We consider ourselves a partner in the market and focus on requirements. Accordingly, we conceive ideas and develop products that suit each particular market and the ways in which people actually live. With our high level of vertical manufacturing, spirit of invention and unwillingness to settle for the first solution to a problem, we ensure the quality of our products worldwide.

We believe the best solutions arise in an environment where both engineering excellence and outstanding employees with exacting quality standards are appreciated.

**The future – made by STIEBEL ELTRON**



# STIEBEL ELTRON

Comfort through Technology

Your local trade partner:

Have we sparked your interest? For further information, see [www.stiebel-eltron.com](http://www.stiebel-eltron.com) or consult your local trade partner.



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