

Heat pumps up to 2000 kW



Heating systems ◀

Industrial energy systems

Refrigeration systems

VIESMAN

## Futureproof and efficient heating technology for all requirements

In industrialised Western nations, heat generation for residential and commercial buildings accounts for the largest proportion of energy consumption – and therefore offers the greatest savings potential. Advanced and energy efficient heating systems from Viessmann are in use around the world, not only in many private households, but also in numerous major projects where they make an important contribution to the sustainable protection of energy reserves.

Viessmann successfully overcomes the most diverse challenges facing advanced heating technology by offering innovative solutions – in historical listed buildings, highly productive industrial complexes and the large-scale residential and commercial arena.

Viessmann has been developing and manufacturing heat pumps for international markets for more than 35 years. Its product range includes customer-specific solutions and matching services.







## Introduction

Heating with renewable energy from the environment – even in higher output ranges

from page 6



## The Vitocal range

Standardised control concept and optimised dimensions complement Viessmann system design

from page 8



## System solutions

Viessmann offers heat pumps for a wide variety of applications and different heat sources

from page 24



## Service, references

Viessmann guarantees that the components and assemblies in its large heat pumps will work seamlessly together – from the individual design process right through to maintenance.

from page 34





# Heating with renewable energy from the environment – even in higher output ranges

Natural heat is an advanced and cost effective alternative to fossil fuels. It is available free of charge and offers independence from oil and gas.

Heat pumps offer ideal conditions for reducing heating bills and environmentally responsible heat generation. After all, the energy a heat pump uses is free and available in unlimited supply from the environment.

With a heat pump, up to 80 percent of the total energy demand can be taken from nature in a highly effective and environmentally responsible manner. Only 20 to 30 percent electrical energy needs to be invested.

The principle is as simple as it is ingenious: The solar energy stored in the ambient air, in the ground and in groundwater is used to efficiently heat domestic hot water and heating water.

## Added value through cooling function and dual mode systems

Heat pumps are also available with high outputs and are designed to meet the energy demand of larger residential complexes and commercial operations. The operating mode can be "reversed", allowing the heat pump to be used for cooling interiors in summer too.

The idea that a heat pump only suits new build projects is outdated. On the contrary, if an existing conventional oil or gas heating system is modernised or extended with a heat pump (as a dual mode system), there will be significant savings on heating bills and lower emissions at the same time. Independence from fossil fuels actively contributes to reducing CO<sub>2</sub> emissions and protecting the climate.

## Recovering environmental energy

Various natural sources are suited to heat recovery using a heat pump:

- Water – such as groundwater, river or lake water, waste water
- Ground – via geothermal probes, geothermal collectors, energy piles
- Air
- Waste heat

Not all these heat sources can be used everywhere. It is therefore necessary to consult the relevant authorities before making a decision, and discuss the technical options with Viessmann.

Viessmann heat pumps are designed for larger residential complexes and commercial operations.



## Vitocal 300-G/-W Pro



Vitocal 300-G Pro  
type BW 302.B150



Vitocal 300-G Pro  
type BW 302.B120

### Take advantage of these benefits

- Brine/water heat pump, single and two-stage  
Heating output: 89 to 240 kW; maximum 1200 kW (as cascade)
- Water/water heat pump, single and two-stage  
Heating output: 112 to 290 kW; maximum 1450 kW (as cascade)
- Low operating costs through high coefficients of performance COP to EN 14511  
up to 4.8 (brine 0 °C/water 35 °C)  
and up to 6 (water 10 °C/water 35 °C)
- Maximum flow temperature: 60 °C (brine 5 °C) for all sizes
- Low noise and vibration emissions through sound-optimised appliance design
- Low running costs with the highest level of efficiency at any operating point through the innovative RCD (Refrigerant Cycle Diagnostic) system with electronic expansion valve (EEV)
- Easy-to-operate Vitotronic control unit with plain text and graphic display
- Ready-to-use connection for fail-safe primary and secondary pumps
- Electronic soft starter for lower starting current and less power drawn from the mains
- Water/water version with stainless steel tubular evaporator for operation without intermediate circuit
- Only 855 mm wide doorway required
- Exceptionally quiet operation for this output range
- Series with PLC-based Vitotronic for better integration in BMS systems



# Vitocal 300-G/-W Pro: Brine/water and water/water heat pumps

These appliances are standardised, enabling quick and straightforward system engineering, as well as transparent cost calculation parameters.

The Vitocal 300-G/-W Pro heat pumps up to 290 kW are in series production. The Pro series features all characteristics of the highly efficient Vitocal 300-G series. The seven output sizes enable most requirements from residential and commercial buildings to be reliably met. These appliances are standardised, enabling quick and comprehensive system engineering, as well as transparent cost calculation parameters. Higher output levels can be achieved by linking up to five Vitocal 300 Pro heat pumps in a single cascade.

## Space efficient design

The hermetically sealed design with new scroll technology requires little space. At only 855 mm wide, with clearance at the bottom to facilitate moving by pallet truck and removable casing panels, the appliance is very easy to handle.

## Direct use of groundwater without an intermediate circuit

Only the Vitocal 300-W Pro series, with its stainless steel tubular evaporator, provides a reliable solution for the direct use of groundwater without an additional intermediate circuit, thus minimising installation costs.

## Pre-assembled electrical equipment

The electrical equipment is already integrated inside the heat pump casing as standard. Factory-fitted contactors for fail-safe primary and secondary pumps, as well as protection for the compressor, reduce installation effort and ensure rapid heat pump installation.

## Proven and reliable technology

The control philosophy was adopted from the Vitocal series for detached and two-family houses. Here, too, the Refrigerant Cycle Diagnostic System (RCD) checks efficiency continuously and safeguards reliable function at any operating point through the interaction

between the electronic expansion valve (EEV) and the extensive sensor technology.

The Vitotronic 200 regulates up to three heating circuits, and, thanks to its natural cooling function, ensures a pleasant ambience on hot summer days. With the optional Vitocom 300 communication module, a comprehensive range of system optimisation settings can be made from anywhere via internet or mobile phone.

## Series with PLC-based Vitotronic

All models are further available with a programmable logic controller (PLC). Data communication via Modbus/BACnet or LAN in particular provides options for even more targeted integration into BMS systems. The PLC-based Vitotronic also allows management of dry coolers and control of up to three heating/cooling circuits.



Easy-to-operate Vitotronic control unit with plain text and graphic display



Plant room in Manisa (Turkey) with five Vitocal 300-G Pro heat pumps used for air conditioning

Specification

Vitocal 300-G Pro brine/water heat pump

Vitocal 300-G Pro	Type	BW 301.C090	BW 301.C120	BW 302.C090	BW 302.C110
<b>Performance data</b> (to EN 14511, B0/W35 °C, 5 K spread)					
Rated heating output	kW	86.6	111	82.8	106.6
Cooling capacity	kW	68.9	88.7	65.8	84.6
Power consumption	kW	18.7	23.5	17.9	23.2
Coefficient of performance ε in heating mode		4.6	4.7	4.6	4.6
<b>Dimensions</b>					
Length	mm	1343	1343	1343	1343
Width	mm	911	911	911	911
Height	mm	1650	1650	1650	1650
Weight	kg	770	870	720	910
Number of compressors	pce	1	1	2	2
Energy efficiency class LT/HT*		A++/A++	A++/A++	A++/A++	A++/A++

Vitocal 300-G Pro	Type	BW 302.C140	BW 302.C180	BW 302.C230
<b>Performance data</b> (to EN 14511, B0/W35 °C, 5 K spread)				
Rated heating output	kW	134.6	173.2	222.0
Cooling capacity	kW	106.6	137.6	177.4
Power consumption	kW	29.3	37.3	47.0
Coefficient of performance ε in heating mode		4.6	4.6	4.7
<b>Dimensions</b>				
Length	mm	1932	1932	1932
Width	mm	911	911	911
Height	mm	1650	1650	1650
Weight	kg	1180	1280	1425
Number of compressors	pce	2	2	2
Energy efficiency class LT/HT*		A++/A+	A++/A+	A++/A+

\*LT for B0/W35 °C, HT for B0/W55 °C

## Vitocal 300-W Pro water/water heat pump

Vitocal 300-W Pro	Type	WW 301.B125	WW 301.B155	WW 302.B125	WW 302.B155
<b>Performance data</b> (to EN 14511, W10/W35 °C, 5 K spread)					
<b>Rated heating output</b>	kW	116	140.1	112.1	145.1
<b>Cooling capacity</b>	kW	102	120	94.2	121.6
<b>Power consumption</b>	kW	20.2	24.2	18.6	24.4
<b>Coefficient of performance <math>\epsilon</math> in heating mode</b>		5.74	5.79	6.0	5.94
<b>Dimensions</b>					
Length	mm	1932	1932	1932	1932
Width	mm	911	911	911	911
Height	mm	1650	1650	1650	1650
<b>Weight</b>	kg	1015	1055	1035	1060
<b>Number of compressors</b>	pce	1	1	2	2
<b>Energy efficiency class LT/HT*</b>		A++/A++	A++/A++	A++/A++	A++/A++

Vitocal 300-W Pro	Type	WW 302.B200	WW 302.B250	WW 302.B300
<b>Performance data</b> (to EN 14511, W10/W35 °C, 5 K spread)				
<b>Rated heating output</b>	kW	186	240	290
<b>Cooling capacity</b>	kW	157	199	244
<b>Power consumption</b>	kW	32.1	42.1	49.5
<b>Coefficient of performance <math>\epsilon</math> in heating mode</b>		5.9	5.7	5.8
<b>Dimensions</b>				
Length	mm	2521	2521	2521
Width	mm	911	911	911
Height	mm	1650	1650	1650
<b>Weight</b>	kg	1330	1380	1425
<b>Number of compressors</b>	pce	2	2	2
<b>Energy efficiency class LT/HT*</b>		A++/A++	A++/A++	A++/A++

\*LT for B0/W35 °C, HT for B0/W55 °C

## Vitocal 350-G Pro



Vitocal 350-G Pro  
type BW 352.A156



Vitocal 350-G Pro  
type BW 352 A156

### Take advantage of these benefits

- Brine/water heat pump, two-stage  
Heating output: 27 to 197 kW
- High flow temperatures: up to 73 °C
- Low operating costs through high coefficients of performance COP to EN 14511  
up to 4.4 (brine 0 °C/water 35 °C)
- Viable under partial load conditions due to the use of two or three compressors with an equal rating
- Low noise and vibration emissions through sound-optimised appliance design
- Intuitive operation of the control unit via touchscreen with schematics
- Possibility of factory pre-installation for products, especially for specific projects
- Provided with standard part-winding start-up system for low starting currents or fitted with an optional electronic soft starter
- Conventional cooling/heating function with heating water buffer cylinder
- PLC-based Vitotronic with Modbus and BACnet communication interface



# Vitocal 350-G Pro: Brine/water heat pump up to 73 °C

The Vitocal 350-G Pro extends the heat pump output range from 27 to 197 kW.

The frame design of the brine/water heat pump makes the powerful and efficient Vitocal 350-G Pro heat pump easier to handle and install. The sound insulated casing (supplied separately) offers a snug fit and reduces the transport weight by around 200 kg. The unit is ideal for modernising heating systems with high flow temperatures.

## Hygienic DHW heating

With high flow temperatures of up to 73 °C, the Vitocal 350-G Pro series meets the requirements for hygienic DHW heating. The special temperature maintaining facility guarantees hot inlet temperatures at all times, even during the loading cycle.

## Reliable technology and straightforward operation

Lying at the heart of the refrigerant circuit are German-manufactured semi-hermetic piston compressors. Depending on performance, two or three compressors are integrated into the refrigerant circuit by way of a compound connection. This guarantees high levels of efficiency, even in partial load operation.

Efficiency is enhanced by electronic injection valves which are self-closing at zero volt to ensure maximum safety if there is a power failure, for example. Additionally, the hermetically sealed design with fewer threaded connections, and the absence of safety valves in the refrigerant circuit, guarantee tightness and a long service life.

For optimal control of the system and refrigerant circuit, the Vitocal 350-G Pro features a PLC-based Vitotronic. The large graphic touchscreen display enables intuitive operation. Its full colour mode highlights the different way functions and operation are displayed.

## Remote monitoring and communication

The control unit recognises numerous data communication options, from a simple analogue modem to a LAN-based system: Modbus technology and BACnet can be used to enable the system to be accessed via the internet for remote maintenance and communication purposes.

## Appliance design optimised for quiet operation

As is the case for all heat pumps, the compressors emit noise in the 50 to 60 Hz range. Due to the high quality construction of the appliance frame and sound insulation, it has been possible to compensate for any noise within the casing.

Vibrations on the base support are barely perceptible, as the 3D anti-vibration design is specifically designed to dissipate vibrations. With a sound power level of 65 dB(A) for the 197 kW heat pump, its value stands up well by comparison with other products in this market segment.

## Optional factory-fitted equipment

The electrical equipment is already fully integrated inside the heat pump. The contactors for circulation pumps are pre-fitted and easily accessible. If requested by the customer, assemblies for optional function extensions can be ordered from the factory. For example, electronic soft starters, which could further improve on the low starting currents of the part-winding function.



Large colour touchscreen with clear display

# Specification

## Vitocal 350-G Pro brine/water heat pump

Vitocal 350-G Pro	Type Type	BW 352.A027/ BW 352.A027SA	BW 352.A034/ BW352.A034SA	BW 352.A056/ BW 352.A056SA	BW352.A076/ BW352.A076SA	BW 352.A097/ BW 352.A097SA
<b>Performance data</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	27.2	34.3	56.1	76	96.9
<b>Cooling capacity</b>	kW	20.8	26.4	43.2	58.8	74.6
<b>Power consumption</b>	kW	6.4	7.9	12.8	17.3	21.9
<b>Coefficient of performance e (COP) in heating mode</b>		4.2	4.4	4.4	4.4	4.4
<b>Performance data*</b> (to EN 14511, W10/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	37.1	47.8	78.6	106	134.1
<b>Cooling capacity</b>	kW	29.7	39	64.2	85.9	109.6
<b>Power consumption</b>	kW	7.4	8.8	14.5	19.6	24.6
<b>Coefficient of performance ε in heating mode</b>		5	5.4	5.4	5.4	5.5
<b>Dimensions</b>						
Length	mm	1848	1848	1848	2153	2153
Width (excl. anti-vibration fittings (casing))	mm	820 (750)	820 (750)	820 (750)	911 (850)	911 (850)
Height	mm	1450	1450	1450	1650	1650
<b>Weight</b>	kg	555	672	723	963	1065
<b>Number of compressors</b>	pce	2	2	2	2	2
<b>Energy efficiency class LT/HT**</b>		A+/A+	A+/A+	A++/A+	A++/A+	A++/A+

Types BW 352.A027SA to BW 353.A198SA come fitted as standard with electronic soft starters with integral rotary field monitoring

\* In W/W operation with intermediate circuit

\*\* LT for B0/W 35 °C, HT for B0/W 55 °C

<b>Vitocal 350-G Pro</b>	Type Type	BW 352.A114/ BW 352.A114SA	BW 352.A132/ BW 352.A132SA	BW 352.A156/ BW 352.A156SA	BW 353.A172/ BW 353.A172SA	BW 353.A198/ BW 353.A198SA
<b>Performance data</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	114.2	131.9	155	170.2	197
<b>Cooling capacity</b>	kW	88.4	101.5	119.2	132	153.3
<b>Power consumption</b>	kW	25.9	30.4	36.3	38.4	45.7
<b>Coefficient of performance <math>\epsilon</math> in heating mode</b>		4.4	4.3	4.3	4.4	4.4
<b>Performance data*</b> (to EN 14511, W10/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	158	181.9	214.4	237	274.2
<b>Cooling capacity</b>	kW	129	148	173.8	193.5	222.8
<b>Power consumption</b>	kW	29	34.1	40.7	44.2	52
<b>Coefficient of performance <math>\epsilon</math> in heating mode</b>		5.4	5.3	5.3	5.4	5.3
<b>Dimensions</b>						
Length	mm	2153	2153	2153	2816	2816
Width (excl. anti-vibration fittings (casing))	mm	911 (850)	911 (850)	911 (850)	911 (850)	911 (850)
Height	mm	1650	1650	1650	1650	1650
<b>Weight</b>	kg	1113	1209	1260	1604	1678
<b>Number of compressors</b>	pce	2	2	2	3	3
<b>Energy efficiency class LT/HT**</b>		A**/A <sup>+</sup>	A**/A <sup>+</sup>	A**/A <sup>+</sup>	A**/A <sup>+</sup>	A**/A <sup>+</sup>

Types BW 352.A027SA to BW 353.A198SA come fitted as standard with electronic soft starters with integral rotary field monitoring

\* In W/W- operation with intermediate circuit

\*\* LT for B0/W 35 °C, HT for B0/W 55 °C

## Vitocal 350-G Pro



Vitocal 350-G Pro  
type BW352.AS1190SAH



Vitocal 350-G Pro  
type BW352.AS1190SAH

### Take advantage of these benefits

- Brine/water heat pump
  - Heating output, single stage: 223 to 564 kW (B0/W35 °C)
  - Heating output, two-stage: 433 to 1128 kW (B0/W35 °C)
- Cooling capacity, single stage: 417 to 661 kW (W7/W35 °C)
- Cooling capacity, two-stage: 491 to 1322 kW (W7/W35 °C)
- EER (= Energy Efficiency Ratio) W7/W35 °C at 5.02
- Low operating costs through high coefficients of performance to EN 14511 up to 4.71 (brine 0 °C/water 35 °C)
- Maximum flow temperature: 65 °C
- Low pressure drop in operation with higher flow temperatures (e.g. at FT 65 °C only up to 10 % pressure drop compared with FT 35 °C)
- Optional sound insulation set for noise reduction of 8 to 10 dB(A)
- 10 bar pressure stage (secondary) for industrial applications
- Wizard with user prompts for easy commissioning
- Factory testing of output and function



# Vitocal 350-G Pro: Brine/water heat pump up to 65 °C

Brine/water heat pump and liquid cooled chiller unit with compact rotary screw compressors.

The Vitocal 350-G Pro with compact rotary screw compressors is a heat pump manufactured in series with heating output ratings above 1 MW and cooling capacities of up to 1490 kW. All models are available with different compressors which offer various benefits depending on application.

## Single and two-stage versions from 223 to 1128 kW

The single stage version covers heating output ratings up to 564 kW. A refrigerant circuit with optimised design is equipped with large area plate heat exchangers on both the evaporator and the condenser sides. Integral output control is possible in stages of 25, 50, 75 and 100 percent.

## Two-stage version

The two-stage version (up to 1128 kW) features two refrigerant circuits that work separately, but that are supplied via a joint tube bundle evaporator.

The particularly efficient single-pass version optimises evaporation temperatures. One four-stage output control unit per refrigerant circuit enables eight partial loads of 12.5 up to 100 percent.

Through balancing control, virtually identical compressor runtimes are achieved, thereby reducing maintenance cycles.

## Comprehensive equipment level and straightforward operation

The machine's control is supported by a PLC-based Vitotronic. Intuitive operation of the 5.7 inch colour touchscreen allows parameter settings to be made quickly. A touch function can also be used to directly access a visualised display of the scheme and the internal refrigerant circuit. System data can be automatically saved up to 14 days retroactively.

As an extended means of control, a Modbus interface can be used to provide external cascade control or for other options. To prevent any liquid evaporator medium from reaching the compressor in the event of a power failure, all Vitocal 350-G Pro appliances are equipped with a separate power pack. It reliably closes the injection valves and shuts down the machine in a controlled way.

## Optional accessories

The standard heat pumps comprise a modular frame design with a mounted control panel. Sound insulation sets are available as retrofit option.

The machines can also be ordered with an electronic soft starter.



Single stage version of the Vitocal 350-G Pro with a heating output of 564 kW

# Specification

## Vitocal 350-G Pro brine/water heat pump with compact rotary screw compressor (single stage)

Compressor version: Hanbell	Type	BW 351.AS240SDH	BW 351.AS260SDH	BW 351.AS300SDH	BW 351.AS330SDH	BW 351.AS350SDH
	Type	BW 351.AS240SAH	BW 351.AS260SAH	BW 351.AS300SAH	BW 351.AS330SAH	BW 351.AS350SAH
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	223	246	280	305	333
<b>Cooling capacity</b>	kW	175	193	220	239	262
<b>Power consumption</b>	kW	49	55	62	68	73
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.55	4.48	4.54	4.50	4.55
<b>Performance data: Cooling</b> (to EN 14511, W12-7/W30-35 °C)						
<b>Rated cooling capacity</b>	kW	259	285	325	353	387
<b>Rated heating output</b>	kW	311	344	390	426	465
<b>Power consumption</b>	kW	54	60	68	74	80
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.82	4.72	4.80	4.74	4.81

Compressor version: Hanbell	Type	BW 351.AS390SDH	BW 351.AS440SDH	BW 351.AS490SDH	BW 351.AS520SDH	BW 351.AS600SDH
	Type	BW 351.AS390SAH	BW 351.AS440SAH	BW 351.AS490SAH	BW 351.AS520SAH	BW 351.AS600SAH
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	368	422	464	494	564
<b>Cooling capacity</b>	kW	288	334	367	390	448
<b>Power consumption</b>	kW	82	91	100	107	120
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.49	4.66	4.64	4.62	4.71
<b>Performance data: Cooling</b> (to EN 14511, W12-7/W30-35 °C)						
<b>Rated cooling capacity</b>	kW	426	493	541	576	661
<b>Rated heating output</b>	kW	513	590	648	690	789
<b>Power consumption</b>	kW	90	100	110	118	132
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.73	4.95	4.93	4.9	5.02

Compressor version: Bitzer	Type	BW 351.AS240SDB	BW 351.AS260SDB	BW 351.AS300SDB	BW 351.AS330SDB	
	Type	BW 351.AS240SAB	BW 351.AS260SAB	BW 351.AS300SAB	BW 351.AS330SAB	
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	216	245	273	305	
<b>Cooling capacity</b>	kW	169	191	213	238	
<b>Power consumption</b>	kW	49	55	62	68	
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.43	4.45	4.43	4.51	
<b>Performance data: Cooling</b> (to EN 14511, W12-7/W30-35 °C)						
<b>Rated cooling capacity</b>	kW	245	278	307	351	
<b>Rated heating output</b>	kW	296	335	371	423	
<b>Power consumption</b>	kW	52	58	66	74	
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.73	4.8	4.63	4.74	

Compressor version: Bitzer	Type	BW 351.AS390SDB	BW 351.AS440SDB	BW 351.AS490SDB	BW 351.AS520SDB	
	Type	BW 351.AS390SAB	BW 351.AS440SAB	BW 351.AS490SAB	BW 351.AS520SAB	
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	362	411	469	527	
<b>Cooling capacity</b>	kW	283	322	370	416	
<b>Power consumption</b>	kW	82	91	100	115	
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.43	4.54	4.69	4.6	
<b>Performance data: Cooling</b> (to EN 14511, W12-7/W30-35 °C)						
<b>Rated cooling capacity</b>	kW	417	473	546	614	
<b>Rated heating output</b>	kW	501	569	652	732	
<b>Power consumption</b>	kW	87	99	110	122	
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.81	4.8	4.98	5.04	

## Vitocal 350-G Pro brine/water heat pump with compact rotary screw compressor (two-stage)

Compressor version: Hanbell	Type	BW 352.AS470SDH BW 352.AS470SAH	BW 352.AS520SDH BW 352.AS520SAH	BW 352.AS600SDH BW 352.AS600SAH	BW 352.AS650SDH BW 352.AS650SAH	BW 352.AS710SDH BW 352.AS710SAH
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	445	493	559	610	666
<b>Cooling capacity</b>	kW	351	386	440	478	524
<b>Power consumption</b>	kW	98	110	123	135	146
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.55	4.48	4.54	4.50	4.55
<b>Performance data: Cooling</b> (to EN 14511, W12-7 / W30-35)						
<b>Rated cooling capacity</b>	kW	518	570	650	707	774
<b>Rated heating output</b>	kW	622	687	781	851	930
<b>Power consumption</b>	kW	108	120	135	149	161
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.82	4.72	4.80	4.74	4.81
Compressor version: Hanbell	Type	BW 352.AS760SDH BW 352.AS760SAH	BW 352.AS900SDH BW 352.AS900SAH	BW 352.AS980SDH BW 352.AS980SAH	BW 352.AS1050SDH BW 352.AS1050SAH	BW 352.AS1190SDH BW 352.AS1190SAH
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	735	844	927	988	1128
<b>Cooling capacity</b>	kW	576	668	733	781	896
<b>Power consumption</b>	kW	164	181	200	214	240
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.49	4.66	4.64	4.62	4.71
<b>Performance data: Cooling</b> (to EN 14511, W12-7 / W30-35)						
<b>Rated cooling capacity</b>	kW	851	986	1083	1153	1322
<b>Rated heating output</b>	kW	1026	1180	1296	1381	1577
<b>Power consumption</b>	kW	180	199	220	235	263
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.73	4.95	4.93	4.9	5.02
Compressor version: Bitzer	Type	BW 352.AS470SDB BW 352.AS470SAB	BW 352.AS520SDB BW 352.AS520SAB	BW 352.AS600SDB BW 352.AS600SAB	BW 352.AS650SDB BW 352.AS650SAB	
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	433	490	546	614	
<b>Cooling capacity</b>	kW	338	383	426	475	
<b>Power consumption</b>	kW	98	110	124	139	
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.42	4.45	4.41	4.38	
<b>Performance data: Cooling</b> (to EN 14511, W12-7/W30-35 °C)						
<b>Rated cooling capacity</b>	kW	491	557	613	702	
<b>Rated heating output</b>	kW	592	669	741	846	
<b>Power consumption</b>	kW	104	116	132	148	
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.73	4.8	4.63	4.74	
Compressor version: Bitzer	Type	BW 352.AS760SDB BW 352.AS760SAB	BW 352.AS900SDB BW 352.AS900SAB	BW 352.AS980SDB BW 352.AS980SAB	BW 352.AS1050SDB BW 352.AS1050SAB	
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
<b>Rated heating output</b>	kW	725	823	938	1055	
<b>Cooling capacity</b>	kW	566	644	739	832	
<b>Power consumption</b>	kW	163	184	205	229	
<b>Coefficient of performance <math>\epsilon</math> (COP) in heating mode</b>		4.44	4.47	4.57	4.60	
<b>Performance data: Cooling</b> (to EN 14511, W12-7/W30-35 °C)						
<b>Rated cooling capacity</b>	kW	834	947	1092	1228	
<b>Rated heating output</b>	kW	1003	1138	1305	1464	
<b>Power consumption</b>	kW	174	187	219	244	
<b>Energy efficiency ratio <math>\epsilon</math> in cooling mode</b>		4.81	4.80	4.98	5.04	

## Vitocal 350-HT



Vitocal 350-HT  
type BW352.AHT96



Vitocal 350-HT  
type BW352.AHT96

### Take advantage of these benefits

- Heating output: 20 to 140 kW
- 10 bar pressure stage for industrial applications
- Integral diagnostic unit monitors the tightness of the refrigerant circuit and reduces maintenance time
- Automatic tightness monitoring for lower operating costs
- Optimum utilisation of waste heat through high permissible primary source temperature of 5 to 45 °C
- Wide application range through temperatures up to 90 °C (no booster heater required)
- High sustainability due to futureproof refrigerant
- Wizard with user prompts for easy commissioning
- Factory testing of output and function



## Vitocal 350-HT: Brine/water heat pump up to 90 °C

Extension of the comprehensive product range to include heat pumps with output ratings between 20 and 140 kW and primary temperatures of up to 50 °C.

The use of renewable heat in commercial applications is also determined by the need for high flow temperatures. Which is why Viessmann has the Vitocal 350-HT heat pump in its comprehensive product range.

### Flow temperature up to 90 °C

The Vitocal 350-HT series delivers a flow temperature of up to 90 °C. It uses heat sources with temperatures of up to 50 °C. This makes it ideal for extracting waste heat and generating high temperatures for industrial and commercial processes or even in older local heating networks to compensate for line losses.

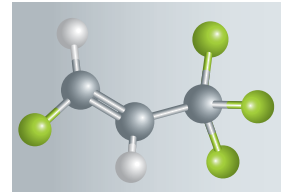
### New refrigerant meets more stringent requirements

With the new refrigerant HFO1234ze, this series already meets refrigerant requirements applicable beyond 2020. The GWP (global warming potential) is as low as that of natural refrigerants.

### Straightforward integration in BMS systems

The control unit is designed for numerous data communication options and integration into BMS systems, from a simple analogue modem to LAN-based systems: Modbus technology and BACnet can be used to enable the system to be accessed via the internet for remote maintenance and communication purposes.

On the unit itself, the 5.7 inch colour touchscreen offers intuitive operation for changing parameters and function control.



HFO molecule – its specification corresponds to that of a natural refrigerant

## Specification

### Vitocal 350-HT Pro brine/water heat pump High temperature heat pump for the utilisation of waste heat

Vitocal 350-HT Pro	Type	BW352.AHT21	BW352.AHT26	BW352.AHT43	BW352.AHT58	BW352.AHT71
Number of compressors		Tandem	Tandem	Tandem	2	2
Compressor type		44DES-14	44VES-20	44NES-40	4HE-25	6JE-33
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
Rated heating output	kW	20.5	25.5	42.5	56.0	71.5
Cooling capacity	kW	15.7	19.7	32.5	42.5	54.6
Power consumption	kW	5.0	6.0	10.3	13.8	17.1
Coefficient of performance ε in heating mode		4.1	4.3	4.1	4.1	4.2

Vitocal 350-HT Pro	Type	BW352.AHT21	BW352.AHT26	BW352.AHT43	BW352.AHT58	BW352.AHT71
Number of compressors		Tandem	Tandem	Tandem	2	2
Compressor type		44DES-14	44VES-20	44NES-40	4HE-25	6JE-33
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B0/W45 °C, 5 K spread)						
Rated heating output	kW	19.0	24.0	40.0	53.0	66.0
Cooling capacity	kW	13.8	17.6	29.3	38.7	48.3
Power consumption	kW	5.5	6.7	11.0	14.6	18.0
Coefficient of performance ε in heating mode		3.5	3.6	3.6	3.6	3.7

Vitocal 350-HT Pro	Type	BW352.AHT21	BW352.AHT26	BW352.AHT43	BW352.AHT58	BW352.AHT71
Number of compressors		Tandem	Tandem	Tandem	2	2
Compressor type		44DES-14	44VES-20	44NES-40	4HE-25	6JE-33
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B45/W80 °C, 5 K spread)						
Rated heating output	kW	54.2	68.6	113.3	148.1	186.1
Cooling capacity	kW	40.9	52.2	86.0	112.2	142.2
Power consumption	kW	14.0	17.3	28.7	37.8	46.2
Coefficient of performance ε in heating mode		3.9	4.0	3.9	3.9	4.0

Vitocal 350-HT Pro	Type	BW352.AHT21	BW352.AHT26	BW352.AHT43	BW352.AHT58	BW352.AHT71
Number of compressors		Tandem	Tandem	Tandem	2	2
Compressor type		44DES-14	44VES-20	44NES-40	4HE-25	6JE-33
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B50/W90 °C, 5 K spread)						
Rated heating output	kW	62.0	78.0	128.0	165.0	217.0
Cooling capacity	kW	46.0	58.0	92.0	119.0	160.7
Power consumption	kW	16.5	20.2	33.8	43.4	56.8
Coefficient of performance ε in heating mode		3.8	3.9	3.8	3.8	3.8

<b>Dimensions</b>						
Length	mm	1848	1848	1848	2153	2153
Width	mm	811	811	811	911	911
Height	mm	1450	1450	1450	1650	1650
Weight	kg	570	690	740	980	1080
<b>Connection, extract air</b>						
Round pipe DN		100	100	100	100	100

All data provisional

## Vitocal 350-HT Pro brine/water heat pump

### High temperature heat pump for the utilisation of waste heat

Vitocal 350-HT Pro	Type	BW352.AHT84	BW352.AHT96	BW352.AHT119	BW352.AHT126	BW352.AHT147
Number of compressors		2	2	2	3	3
Compressor type		6HE-35	6GE-40	6FE-50	6HE-35	6GE-40
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B0/W35 °C, 5 K spread)						
Rated heating output	kW	86.0	98.0	119.5	126.5	147.0
Cooling capacity	kW	65.4	74.0	90.5	95.0	105.0
Power consumption	kW	20.9	24.5	29.5	31.5	36.9
Coefficient of performance $\epsilon$ in heating mode		4.1	4.0	4.1	4.0	4.0

Vitocal 350-HT Pro	Type	BW352.AHT84	BW352.AHT96	BW352.AHT119	BW352.AHT126	BW352.AHT147
Number of compressors		2	2	2	3	3
Compressor type		6HE-35	6GE-40	6FE-50	6HE-35	6GE-40
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B0/W45 °C, 5 K spread)						
Rated heating output	kW	78.0	90.0	109.0	117.0	135.0
Cooling capacity	kW	56.7	64.7	77.9	84.9	96.9
Power consumption	kW	21.6	25.6	31.4	32.4	38.4
Coefficient of performance $\epsilon$ in heating mode		3.6	3.5	3.5	3.6	3.5

Vitocal 350-HT Pro	Type	BW352.AHT84	BW352.AHT96	BW352.AHT119	BW352.AHT126	BW352.AHT147
Number of compressors		2	2	2	3	3
Compressor type		6HE-35	6GE-40	6FE-50	6HE-35	6GE-40
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B45/W80 °C, 5 K spread)						
Rated heating output	kW	217.6	247.4	302.4	326.4	371.1
Cooling capacity	kW	164.8	186.2	226.4	247.2	279.3
Power consumption	kW	55.6	64.4	80.0	83.4	96.6
Coefficient of performance $\epsilon$ in heating mode		3.9	3.8	3.8	3.9	3.8

Vitocal 350-HT Pro	Type	BW352.AHT84	BW352.AHT96	BW352.AHT119	BW352.AHT126	BW352.AHT147
Number of compressors		2	2	2	3	3
Compressor type		6HE-35	6GE-40	6FE-50	6HE-35	6GE-40
Refrigerant		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
<b>Performance data: Heating</b> (to EN 14511, B50/W90 °C, 5 K spread)						
Rated heating output	kW	254.0	290.0	328.0	373.0	428.0
Cooling capacity	kW	180.0	206.0	240.0	272.0	311.0
Power consumption	kW	67.4	78.0	88.4	102.0	118.0
Coefficient of performance $\epsilon$ in heating mode		3.8	3.7	3.7	3.7	3.6

Dimensions						
Length	mm	2153	2153	2153	2816	2816
Width	mm	911	911	911	911	911
Height	mm	1650	1650	1650	1650	1650
Weight	kg	1130	1230	1280	1625	1695
Connection, extract air						
Round pipe DN		100	100	100	100	100





# Heat pumps for any application and all kinds of energy from nature or processes

With many years of experience and a high level of manufacturing expertise, Viessmann is your heat pump manufacturer of choice for standardised and bespoke solutions.

Drawing on more than 35 years of experience, Viessmann works together with its customers to develop energy solutions that will stand up to any challenge. Whenever standard production appliances from the Vitocal range are no longer adequate, bespoke solutions are the answer. Reliable deadlines and predictable costs with – no unexpected surprises. All heat pumps – standard products and special solutions – demonstrate the required outputs on the test bed and in practice. All materials and processes used are certified, and have been awarded the ISO 9001 quality seal.

## Mono or dual mode solutions

Depending on the available space and the tasks required, the heat pump system is engineered and manufactured individually for each application: water/water, brine/water and air/water.

The output spectrum of these systems ranges from 15 to 2000 kW and can be extended if required, for example with a cascade linking several heat pumps.

It is also possible to implement a dual mode heating system. Here, the heat pump provides the base supply to provide domestic hot water and heating water. Any additional heat required, for example when temperatures are extremely low, is then supplied by an oil or gas condensing boiler, which kicks in automatically.

## Intelligent control concepts

Advanced building services require integrated control concepts in an open system architecture. Viessmann control systems offer the customer maximum functionality and reliability.

As part of the building management system, a control unit for large heat pump also regulates, for example, the ventilation and heating/cooling circuits, as well as DHW heating. It hooks up the energy meter and captures the energy flow via Modbus – visualised clearly for the user on the display.

Remote monitoring is also possible. This enables operational characteristics and data to be analysed and evaluated. In the event of a fault, suitable steps to eliminate the cause can be initiated immediately.

Clear control technology enables integration into an open system architecture.



## Brine/water heat pumps



Brine/water heat pump with a  
heating output of 290 kW

# Energy recovery with geothermal probes: A stable and durable heat source

Brine/water heat pumps utilise the heat stored in the ground.  
It is both free and readily available.

Geothermal probes are durable and maintenance free and tap into the heat source. In conjunction with heat pumps, they deliver heating energy, and are also the ideal heat exchanger for natural cooling. Viessmann brine/water heat pumps utilise the ground, both to draw free energy for heating and to dump energy when cooling. This dumped energy is available again later for heating purposes.

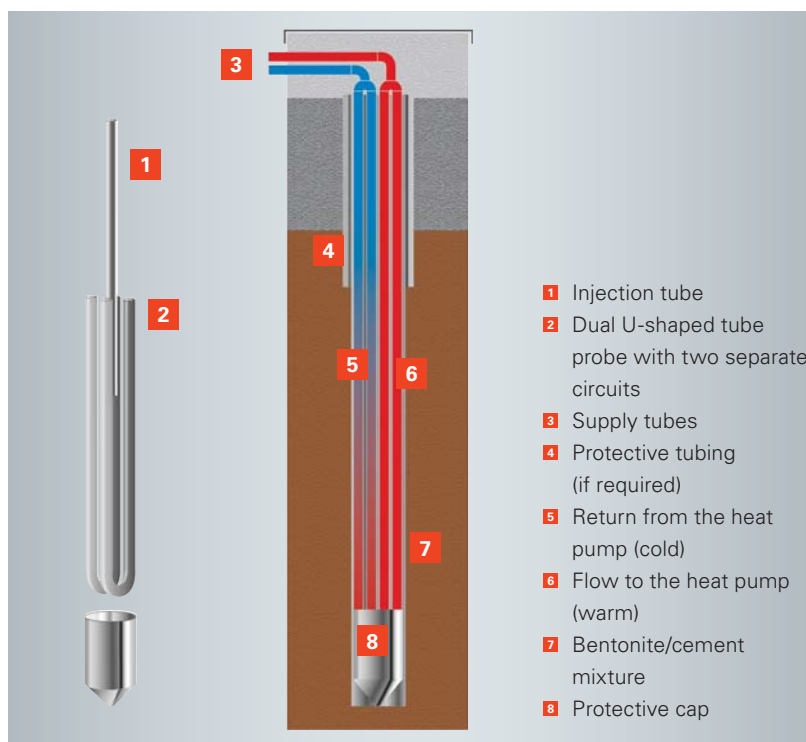
## Perfect size for all kinds of heat transfer

Heat pumps are designed and sized according to customer specifications. Flow temperatures of 35 to 40 °C are economical and cost effective for surface heating systems. If required, they can be equipped with efficient output modulation or multi stage refrigerant circuits.

Ventilation systems work with flow temperatures of up to 55 °C. If, for technical reasons, temperatures of up to 70 °C are required, heat pumps from the Vitocal 350-G Pro series offer the perfect solution.

## Convenient DHW heating

Frequently, DHW temperatures above 60 °C are required. However, particularly for large heat pumps, the performance proportion for DHW heating is low. In such cases, multi stage heat pumps or hot gas decoupling are a convenient solution. The use of special safety heat exchangers guarantees global potable water requirements are maintained.



## Geothermal probe

The geothermal probe is composed of two U-shaped tubes. In the centre of this tube bundle there is an injection tube through which a bentonite/cement mixture is pressed after the probe has been installed in situ. The drilled hole is filled from bottom to top. This guarantees the entire probe is connected with the surrounding earth, seals off any water-carrying layers from one another and protects the probe.



Geothermal probe manifold



## Water/water heat pumps



Water/water heat pump with a  
heating output of 500 kW



## Groundwater and surface water: Heat sources for high efficiency

High quality stainless steel tubular heat exchangers guarantee high output and reliable operation of the water/water heat pumps.

For heat pumps, groundwater in a temperature range of 8 to 12 °C is a very rich heat source, as the temperature level is high all year round.

### **Stainless steel heat exchangers offer many benefits**

Viessmann water/water heat pumps for groundwater or surface water are equipped with high quality stainless steel tubular heat exchangers. A large volume and generously sized surfaces in the evaporator are important benefits. They are not susceptible to icing up in the border area. Light floating matter is simply flushed through with the medium. Corrosive chemical liquids have little destructive effect on the high grade stainless steel.

### **Energy from water at 4 °C**

Heat pumps from the standard range can no longer draw energy from water at 4 °C. Viessmann designed their large heat pumps especially for this purpose. The tube bundle evaporator made from 1.4401 stainless steel features a de-icing circuit. Water below the layer of ice on a lake or river can still be used.

### **Modules simplify handling**

When existing heating centres are being modernised or converted, transporting the new unit on site often proves difficult. Viessmann delivers the heat pump as several modules for assembly on site.



Refrigerant circuit of a water/water heat pump with stainless steel tubular heat exchanger



Subject to installation conditions, Viessmann heat pumps are delivered as modules.



## Waste heat technology



This heat pump uses waste heat and, at the same time, cools the data processing centre and appliance test beds at the Viessmann head office in Allendorf

## Using waste water and waste heat from production processes as heat sources

Through heat extraction, energy that has already been paid for can be returned to the heating circuit.

Waste water and waste heat contains a considerable amount of latent energy, which is rarely utilised. The fuel to generate this heat has already been paid. The use of a large Viessmann heat pump enables this heat to be utilised efficiently.

### DHW heating in hotels

Waste water from hotels and leisure complexes is usually at a residual temperature of 25 to 35 °C. However, a large amount of fresh hot water is also required for showers and spas. Before the warm waste water reaches the sewer system, a heat pump extracts the residual heat latent in the water. This provides fresh DHW at a flow temperature of 60 °C or above.

### Utilising waste heat for heating

Heating doesn't always come first. In many sectors of industry, process water has to be cooled, often through the use of cooling towers. However, a heat pump is generally a more efficient and more economical solution, especially when the heat extracted from this process can be re-used elsewhere.

For both application ranges, Viessmann develops and builds special heat pumps, which have been used successfully in many energy systems for a number of years.



In the 5 star Ritz Carlton Hotel in St Moritz, heat is recovered from waste water.



This waste water shaft is used as a primary source for DHW heating.



A waste water heat pump with 150 kW output for DHW heating



## Air/water heat pumps



Air/water heat pump



Glycol dry coolers for an air/water  
heat pump

## Air as heat source: Ideal in dual mode systems or for cooling

In conjunction with conventional heat generators, air/water heat pumps are an economical solution if cooling is also required.

When an air/water heat pump is used, the outdoor air fulfils two tasks: For heating, the heat pump utilises the outdoor air at a temperature of down to 5 °C, managing to cover up to 50 percent of the annual heat load in a particularly efficient way. Where cooling is required, the surplus heat inside the building is routed to the outdoor air.

### **Split design comprising a heat pump and a cooler**

Air/water heat pumps in the high output range comprise two units: the indoor heat pump and the dry cooler, which is installed outdoors. Both units of this split design are connected by hydraulic lines carrying brine.

A system of this magnitude is operated as part of a dual mode energy system. From a specific outside temperature onwards, a second heat generator backs up or carries out the efficient heat generation. The system is controlled by a common control unit.

### **Heating and cooling with high efficiency**

Air/water heat pumps from Viessmann are designed for heating and cooling. In both cases, the highest level of efficiency is guaranteed thanks to variable speed DC fans. The special design of the air heat exchangers, with gaps twice as wide as in conventional chillers, optimises heat transfer. It also lowers the pressure drop of the air stream, ensures a fast defrost process and reduces noise.



Glycol dry coolers for air/water heat pumps, mounted on a wall

## Engineering, service and monitoring

The individual design of large Viessmann heat pumps and full in-house manufacturing guarantee optimum interaction of all components.



A 24 hour service is available for Viessmann bespoke heat pumps.

Following installation of a large heat pump, Viessmann engineers or authorised service contractors commission the system, check its performance and reliability, document all the work carried out, and instruct the future operators.

As the only heat pump manufacturer with full in-house manufacturing, Viessmann guarantees optimum interaction of components and assemblies.

### **Service round the clock**

Large heat pumps designed for specific projects can be monitored on a contractual basis from the Viessmann control centre. Data communication and remote maintenance is used to detect irregularities early during operation and enables appropriate steps to rectify them to be initiated.

These services are particularly appropriate for large residential complexes, commercial and industrial buildings, restaurants, hotels, and communal facilities such as schools and swimming pools, etc. This, of course, also includes dual mode systems, such as a combination of heat pump and oil/gas boiler to cover peak loads.

The results for the user are a high level of serviceability, top quality and maximum flexibility. Additional building services can be integrated, providing the perfect finishing touches to the range of services on offer.



## Tailor-made solutions for all output sizes

Special heat pumps from Viessmann are built according to customer specifications and factory tested for fault-free function.

### **Lotte World II, Seoul, South Korea**

Heating output installed: 22,200 kW

Cooling capacity installed: 20,400 kW

Installed heat pumps: 12

Special features:

720 geothermal probes at 200 m (for 6 heat pumps), river water (for 6 heat pumps), simultaneous heating and cooling



### **Inselspital Bern, Switzerland**

Cooling capacity installed: 1552 kW

Heating output installed: 1769 kW

Compressors: 4

Special features:

Primary source for cooling operating theatres, and cold rooms, simultaneous heating and cooling



## References



### **Inntal commercial nursery, Germany**

Heating output installed: 1560 kW

Cooling capacity installed: 1280 kW

Electrical output: 279 kW

Special features:

3 well systems as primary source

each with 90 m<sup>3</sup>/h,

energy to heat the greenhouse floor,

dual mode system with Viessmann boiler



### **Residential complex in Brissago, Lake Maggiore, Switzerland**

Cooling capacity installed: 86.4 kW

Electrical output: 33.8 kW

Heating output: 120.2 kW

Special feature:

Lake water as a heat source





**Lidl distribution centre,  
Weinfelden, Switzerland**

Cooling capacity installed: 434 kW

Electrical output: 201 kW

Heating output: 625 kW

Special feature:

Refrigeration unit as a heat source



**Residential complex, Cologne, Germany**

Cooling capacity installed: 56 kW

Electrical output: 18 kW

Heating output: 74 kW

Special feature:

Dual mode system with Vitocrossal 300  
gas condensing boiler, 105 kW



## References



### **Keckeisen Akkumulatoren, Memmingen, Germany**

Cooling capacity installed: 119 kW

Heating output installed: 150 kW

Special features:

Concrete core activation and  
radiating ceiling panels,  
energy contracting



### **Steca Elektronik, Memmingen, Germany**

Cooling capacity installed: 384 kW

Heating output installed: 484 kW

Heat pumps: 2

Special features:

Use of waste heat,  
energy contracting





**Kiesel GmbH, logistics centre,  
Stockstadt am Rhein, Germany**

Cooling capacity installed: 284 kW

Heating output installed: 382 kW

Heat pumps: 2

Special features:

Dual mode system with Vitoplex 300  
gas condensing boiler, 1600 kW



**Ecolab, Monheim,  
Germany**

Cooling capacity installed: 1056 kW

Heating output installed: 720 kW

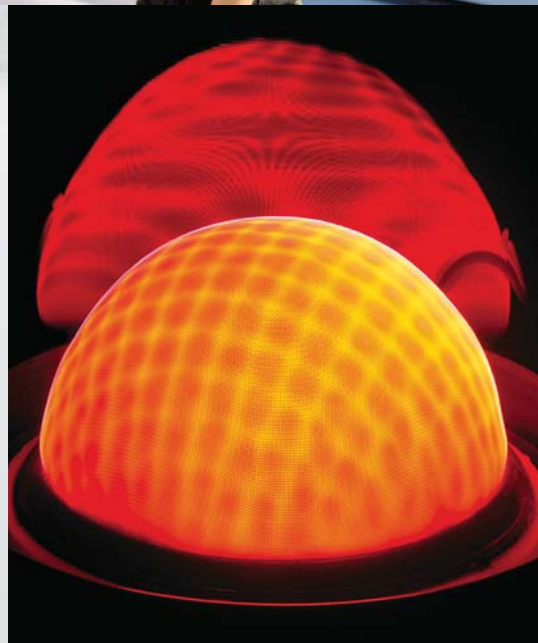
Heat pumps: 2

Special features:

1800 m<sup>3</sup> ice store for cooling and heating,  
dual mode system with gas condensing boiler



## The company





## Viessmann – climate of innovation

Viessmann is one of the world's leading manufacturers of intelligent, convenient and efficient systems for heating, cooling and decentralised power generation.

As a third generation family run business, Viessmann has been supplying highly efficient and clean heating systems for many decades.

### A strong brand creates trust

Together with our brand label, our key brand message is an identifying feature throughout the world. "Climate of innovation" is a promise on three levels: It is a commitment to a culture of innovation. It is also a promise of enhanced product benefits and, at the same time, an obligation to protect the environment.

### Acting in a sustainable manner

For Viessmann, taking responsibility signifies a commitment to acting sustainably.

This means harmonising ecology, economic concerns and social responsibility so that

the needs of today are met without compromising the quality of life of future generations.

We consider climate protection, environmental responsibility and resource efficiency to be key priorities throughout our company, which has more than 11,600 employees worldwide.

### Example of Best Practice

With its strategic sustainability project, Viessmann demonstrates at its own head office in Allendorf (Eder) that the energy and climate policy goals set for 2050 can in fact be achieved today with commercially available technology. The results speak for themselves:

- Expansion of renewables to 60 percent
- CO<sub>2</sub> emissions reduced by 80 percent

The long term goal is for the company to meet all its own heating energy requirements by sustainable means.



2009/2011/2013:  
German Sustainability Award  
for Production/Brand/Resource  
Efficiency



Energy Efficiency Award 2010

### Viessmann Group

#### Company details

- Established in: 1917
- Employees: 11,600
- Group turnover: 2.2 billion euros
- Export share: 56 percent
- 22 production companies in 11 countries
- 74 countries with sales companies and branches
- 120 sales offices worldwide

#### The comprehensive product range from the Viessmann Group for all energy sources and output ranges

- Boilers for oil or gas
- Combined heat and power generation
- Hybrid appliances
- Heat pumps
- Wood combustion technology
- Biogas production plants
- Biogas upgrading plants
- Solar thermal
- Photovoltaics
- Accessories
- Refrigeration systems



climate of innovation

Viessmann Werke GmbH & Co. KG  
35107 Allendorf (Eder)  
Telephone +49 6452 70-0  
Fax +49 6452 70-2780  
**[www.viessmann.com](http://www.viessmann.com)**

Your trade partner:

9443 294 - 4 GB 03/2016

Copyright Viessmann  
Duplication and alternative use only with prior written consent.  
Subject to technical modifications.