

WIKORA

SolarSpeicherSysteme



WIKOSOL HPS Heat pumps high-performance systems
For the replacement and modernization of heaters in existing buildings



Components Wikora heat pump system WIKOSOL HPS

The air-to-water heat pump ZUBADAN including universal control UVR 1611, heat quantity counter and combi buffer tank WIKOSOL HPS guarantee in combination with the complete System the highest level of efficiency.

Mitsubishi ZUBADAN*



Universal control UVR 1611



WIKOSOL HPS



Heat quantity counter



- The first inspection, configuration and commissioning are included
- The installation work (heating / cooling / electrical) is carried out by the customer
- * Model according to system variant

Advantages Wikora heat pump system WIKOSOL HPS

- + Ecologically / economically sensible and future-proof alternative
- + Heating cost savings up to 50%
- + Most powerful heat pump on the market for existing buildings
- + Improvement of the annual work balance by combining the heat pump with Combi buffer storage WIKOSOL HPS
- + Independence from fossil fuels like gas or oil
- + No investment in a gas connection
- + No costs such as chimney sweep / service costs / consumables
- + No additional space required for installations
- + Long operational reliability through the use of high quality and robust components

Market situation Air-water heat pumps

The market for air-to-water heat pumps for heating purposes is divided in Germany in terms of use in the new building and the old building.

The Wikora heat pump system WIKOSOL HPS was specially designed for the exchange and modernization of heaters in existing buildings, but also offers a cost effective and environmentally friendly alternative for the new buildings.



Old Building

- High flow temperatures up to 60 °C
- Efficient use in existing heating systems
- No additional electric heating necessary
- No replacement of existing radiators

New building

- Build from the beginning on energy efficiency
- Monovalent operation, no electric heating required
- Save annual energy costs as well as additional chimney and connection costs



Oil heating

Number of oil heaters in Germany (2017)

5.6 million

Age structure of oil heating in Germany

25% older than 25 years

Gas heating

Number of gas heaters in Germany (2017)

15 million

Age structure of gas heating in Germany

15% older than 25 years

Number of oil and gas heaters installed over 20 years ago

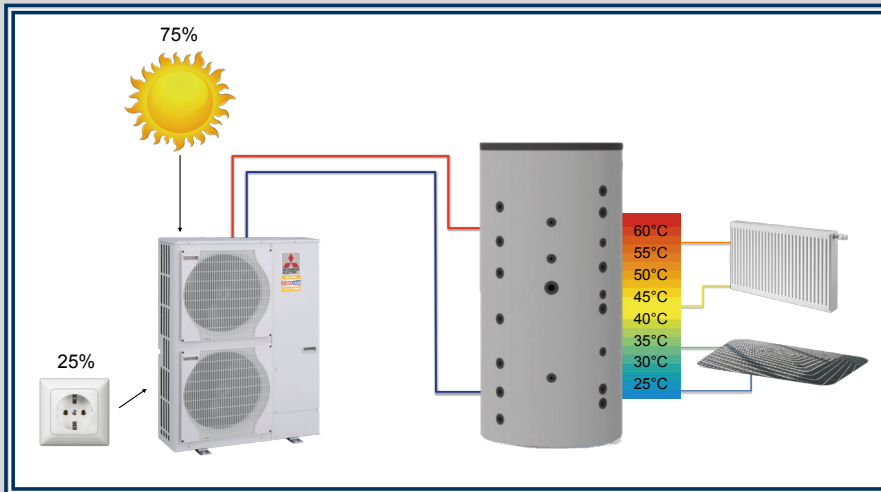
8.870.000

55 to 70 percent of the heating system is outdated!

Source: Bundesverband des Schornsteinfegerhandwerks

Wikora heat pump system WIKOSOL HPS

With up to 75% free environmental heat and around 25% electricity for the compressor, the ZUBADAN heat pump generates the heat needed for heating and hot water.

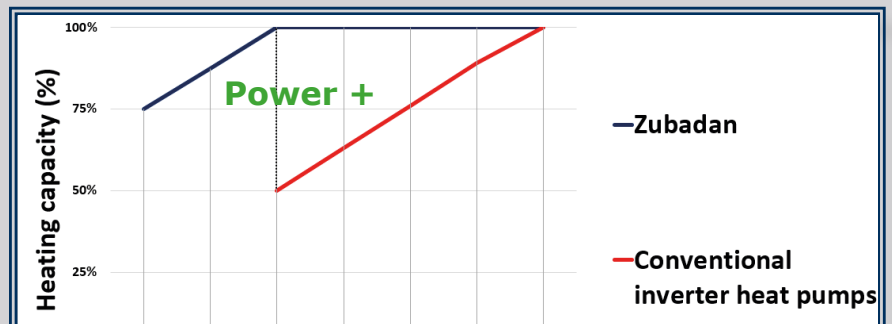


Combination with others Heat transfer possible

- Stoves with heating water coil
- Wood boiler
- Solar thermal
- Photovoltaics
- Heat recovery systems

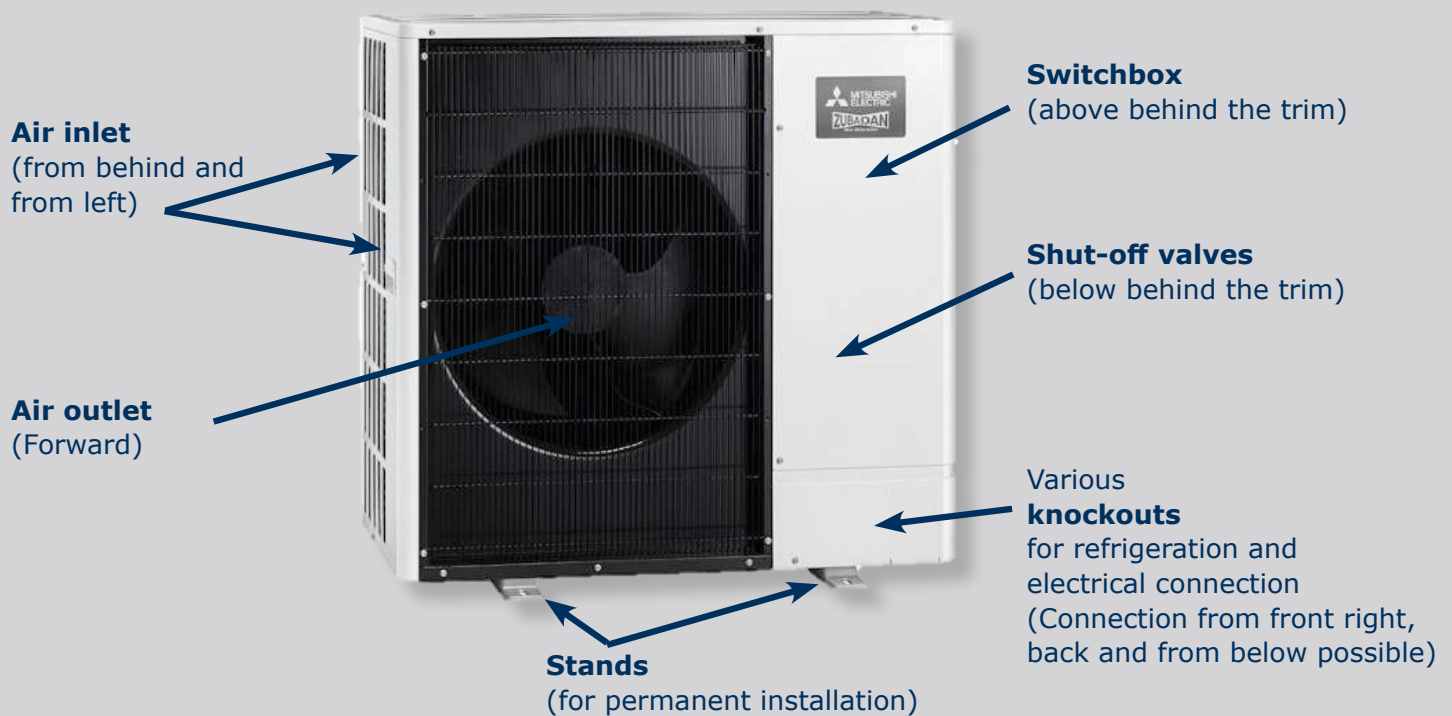
- Storage with integrated condensation heat exchanger optimizes the operation of the heat pump
- Higher performance thanks to newly developed patented compaction system
- Large-dimensioned copper finned tube heat exchanger stands out from conventional heat pumps with plate heat exchanger
- Flow temperatures up to 60 ° C allow use in existing heating systems
- Direct heat dissipation in the buffer tank results in optimum temperature stratification
- With the patented Zubadan inverter technology is always available even at low outside temperatures sufficient heating power available
- Application range up to -28°C (Guaranteed without loss of performance down to -15° C)
- Over-dimensioning of the devices for heating operation unnecessary
- Unique, future-proof and durable system combination

**Monovalent operation:
Electric heater is not
required.**



Heat pump Mitsubishi Electric ZUBADAN

- Housing and frame are made of sturdy galvanized steel sheets with additional polyester enamel and internal sound insulation
- High performance heat exchanger as evaporator and condenser
- Increase the coefficient of performance by up to 70% compared to a conventional inverter-controlled compressor
- Worldwide patented Flash injection, to increase the useful cooling capacity and avoidance of power losses in heating operation at low outside temperatures
- Hardly shutdown breaks by EVU or defrosting
- Low vibration, mounted on vibration dampers with highest efficiency
- Weather-protected drive motor, maintenance-free with thermal overload protection
- Torque increase by neodymium magnets to minimize friction losses



Technical data ZUBADAN

Designation		8/11Y	11Y	14Y	23Y
Heating capacity min/max	KW	4,5 - 10,2/12	4,5 - 14,0	4,5 - 16,0	4,5 - 25,0
Application outside air temperature	°C	-28 to +35	-28 to +35	-28 to +35	-28 to +35
Height	mm	1020	1350	1350	1338
Width	mm	1050	950	950	1050
Depth	mm	480	330	330	330
Weight	kg	128	134	134	148
Refrigeration connections	mm	9,52/15,88	9,52/15,88	9,52/15,88	25,4/12,7
Sound pressure level (1 meter)	db/A	45	52	52	60

Buffer tank WIKOSOL HPS

- Buffer tank with 600/800/1000 liters as indoor unit
- Directly condensing hygiene storage
- Drinking water heat exchanger made of stainless steel
- High-performance stainless steel exchanger enables excellent bulk flow despite the low drinking water content
- Optimal legionella protection
- Stainless steel heat exchanger has no contact with the steel container
- Oversized condensation exchanger enables an optimal COP value of the heat pump
- Heat pumps up to 23 kW can be connected
- Buffer tank is corrosion protected by paint on the outside
- Removable Neopor / fleece insulation for energy efficiency class B or C

Technical data WIKOSOL HPS

Designation		WIKOSOL HPS 605	WIKOSOL HPS 805	WIKOSOL HPS 1005
Storage volume	Liters	492	790	990
Max. perm. storage tank temperature / DHW	°C	95	95	95
Max. perm. overpressure DHW / heating water	bar	10/3	10/3	10/3
Content / surface drinking water heat exchanger	Liters/m ²	ca. 28/4,0	ca. 32/5,5	ca. 32/5,5
Insulation	mm	130 [100]	140 [100]	150 [100]
Warming loss	Watt	80 [113]	90 [129]	96 [140]
Energy efficiency class		B [C]	B [C]	B [C]
Dimensions				
Diameter container (with insulation)	mm	910 [850]	1070 [990]	1090 [990]
Diameter container (without insulation)	mm	650	790	790
Device height (with insulation)	mm	1880	2008	2195
Tilting dimension (without insulation)	mm	1765	1924	2150
Weight (without insulation)	kg	126	149	197

[] Values for energy efficiency class C



Universal control UVR 1611

- Freely programmable through various function modules
- Can be adapted to any system configuration for boiler room management
- Interface C.M.I. enables monitoring and operation via LAN or web portal
- Possibility of displaying an interactive visualization on a notebook, smartphone or tablet
- C.M.I. App for data display
- Enlargement of the inputs and outputs by further CAN bus components
- Program creation with software TAPPS2



Applications

The Wikora heat pump system can be used in old buildings and new buildings for various living space sizes.

	Old building	Old building renovated	New building
Heat pump 8/11Y	170 m ²	190 m ²	220 m ²
Heat pump 11Y	200 m ²	220 m ²	280 m ²
Heat pump 14Y	240 m ²	260 m ²	330 m ²
Heat pump 23Y	360 m ²	400 m ²	500 m ²
Insulation	<ul style="list-style-type: none"> ■ Roof insulation ■ At least insulation floor ceiling ■ Windows / doors glazed at least twice ■ Minimal drafts 	<ul style="list-style-type: none"> ■ Good roof insulation ■ Windows / doors at least 2-fold glazed (not older than 10 years) ■ Shutters insulated 	<ul style="list-style-type: none"> ■ Not older than 10 years
Heater	<ul style="list-style-type: none"> ■ Radiator 	<ul style="list-style-type: none"> ■ Radiator ■ Partial underfloor heating 	<ul style="list-style-type: none"> ■ Radiator ■ Underfloor heating
Heating load Heat demand	70 W/ m²	60 W/ m²	50 W/ m²

Economy and consumption of the heat pump compared to oil and gas

	Oil (10 kw/l)	Gas (10 kw/m ³)	Heat pump
Average annual requirement	3,000 l Öl per year = 30,000 kw/a less 10% exhaust gas loss = 27,000 kw/a	4,000 m ³ Natural gas H = 40,000 kw/a less 10% exhaust gas loss = 36,000 kw/a	Compared to oil: 27,000 kw/a: 3.5 annual work WP = 7,700 kw/a Compared to gas: 36,000 kw/a: 3.5 annual work WP = 10,300 kw/a
Average heat price	7.5 - 8 Cent per kw/h	6 - 7 Cent per kw/h	5 - 5.5 Cent per Kw/h
Savings	<ul style="list-style-type: none"> ■ Compared to incineration systems, chimney sweeps / service costs / consumables costs of about 300-400 € per year do not apply to the heat pump. ■ With additional use of photovoltaic systems, the heating costs of the heat pump sink to about 3.5 cents per kw/h. 		

System variants

System variant	WIKOSOL HPS 8/11Y-605	WIKOSOL HPS 8/11Y-805	WIKOSOL HPS 11Y-805	WIKOSOL HPS 14Y-805	WIKOSOL HPS 14Y-1005	WIKOSOL HPS 23Y-1005
						
Heat pump	Zubadan 8/11Y	Zubadan 8/11Y	Zubadan 11Y	Zubadan 14Y	Zubadan 14Y	Zubadan 23Y
Tank (silver)	WIKOSOL HPS 605	WIKOSOL HPS 805	WIKOSOL HPS 805	WIKOSOL HPS 805	WIKOSOL HPS 1005	WIKOSOL HPS 1005
Universal control	UVR 1611	UVR 1611	UVR 1611	UVR 1611	UVR 1611	UVR 1611
Heat quantity counter	WIK-VFS	WIK-VFS	WIK-VFS	WIK-VFS	WIK-VFS	WIK-VFS
Article-No.	68116050103	68118050103	61108050103	61408050103	61410050103	62310050103

You receive prices on request.



More information about
our company and
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www.wikora.de



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