HIGH-TECH HEAT PUMPS

Heating and cooling with energy from the environment

OCHSNER
HEAT PUMPS

OCHSNER

THE COMPANY

Committed to progress

The OCHSNER Wärmepumpen GmbH was founded in 1978 and since the beginning has been characterised by energy consciousness, pioneer spirit and innovation. As one of the first manufacturers in Europe, OCHSNER began the first industrial production of heat pumps and is today internationally ranked as one of the technology leaders in the industry. Manufacturing takes place exclusively in Austria and Germany.

Ever more efficient heat pumps with the highest possible customer usage are the result of decades of experience, research and development. A practically unlimited supply of stored solar energy is available in the ground, in water and in the air.

The economical use and conservation of non-renewable resources and the reduction of emissions has to be our common goal. OCHSNER has the vision of contributing to the solution of our communal national and global energy future by the use of environmental energy. By means of the optimum use of environmental warmth, OCHSNER heat pumps are the most economical and future-proof heating and cooling systems for the user.

Strength from tradition

The original OCHSNER company was founded as early as 1872 in Silesia. The manufacturing program was limited at first to appliances and pumps.

From 1946 to 1992, the Linz factory was known for its technical achievements in the field of process pumps and compressors. Notable customers included international plant construction companies as well as the US-Navy and NASA.

The compressor production program comprised both piston and screw compressors up to 500 kW.

Since 1992, Karl Ochsner and his team have been concentrating exclusively on the heat pump sector. He heads the company as Managing Director together with his son, Karl Jnr. The company will celebrate its 140th anniversary in 2012.

OCHSNER

THE TECHNOLOGY LEADER

Quality for the highest demands

Quality

The heating system is the technical heart of each and every building – it supplies it with warmth and must not fail. Thus, when buying a heat pump, no compromises should be made. Economy, operational safety and long life count the most.

Leaders in heating system renovation

OCHSNER was the first manufacturer to introduce onto the market a heat pump range for every heat source, with a flow temperature to the heating system of 65°C as standard. Through this, existing heating systems with conventional radiators can also be operated.

Leaders in heat sources air and ground

The OCHSNER Air-Split heat pumps are achieving efficiency record values for years, they are the most silent appliances and ensure the lowest heating costs. OCHSNER is leader as far as energy efficiency for heat source ground is concerned as well.

Advantage through technology

OCHSNER's cutting-edge technology is the result of continuous intensive research and development. The results of our own research laboratories, coupled with decades of practical experience are today offering solutions for tomorrow's demands.

Seal of approval - confirmed peak performance
High-quality heat pumps are recognised by the European ehpa-seal of approval. Only those heat pumps which have been tested under the strictest conditions by independent institutes and when manufacturers fulfil the requirements for service and documentation are entitled to this approval.

OCHSNER is the first manufacturer who has been awarded the D-A-CH heat pump seal of approval for heating heat pumps. OCHSNER is the first, and up to now the only, manufacturer to have been awarded the ehpa-seal of approval for domestic hot water heat pumps. The test results from the heat pump testing centre in Buchs (Switzerland) are, by-the-way, available online at www.wpz.ch. Take a look for yourself.

Convincing arguments

- Independence
- Economy
- Protection of the environment
- For every heat-distribution system
- Maintenance-free, clean
- Secure investment

OCHSNER stands for highest efficiency, safety of operation and long life.

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HEAT PUMPS

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THE HEAT PUMP

One system for all applications

Heating AND cooling

OCHSNER heat pumps are available if desired with the additional **active cooling** function – by reversing the refrigerant circuit. Here, a pleasant temperature regulation takes place, draught-free and silently by means of the existing heat distribution system (e.g. wall heating, underfloor heating or special radiators)

Heat system renovation

Replace your existing boiler with an energy-saving and environmentally friendly OCHSNER heat pump! Conventional radiators with flow temperatures up to 65°C can also be operated.

Domestic hot water preparation (see page 19)

At OCHSNER you have the choice of deciding on the most economical system – heat your domestic hot water (DHW) independently from the heating system with an EUROPA-Series hot water heat pump – or together with your heating heat pump by means of an external DHW-storage tank.

The specialist for every requirement

» Complete product range
from 2 to 1000 kW rating

» Every heat source
Water, earth brine/direct expansion and air

» The safest investment
To invest in a high-quality heat pump system today not only guarantees high interest (= savings on operational costs), but also increases the value of your building. Safely and without risk.

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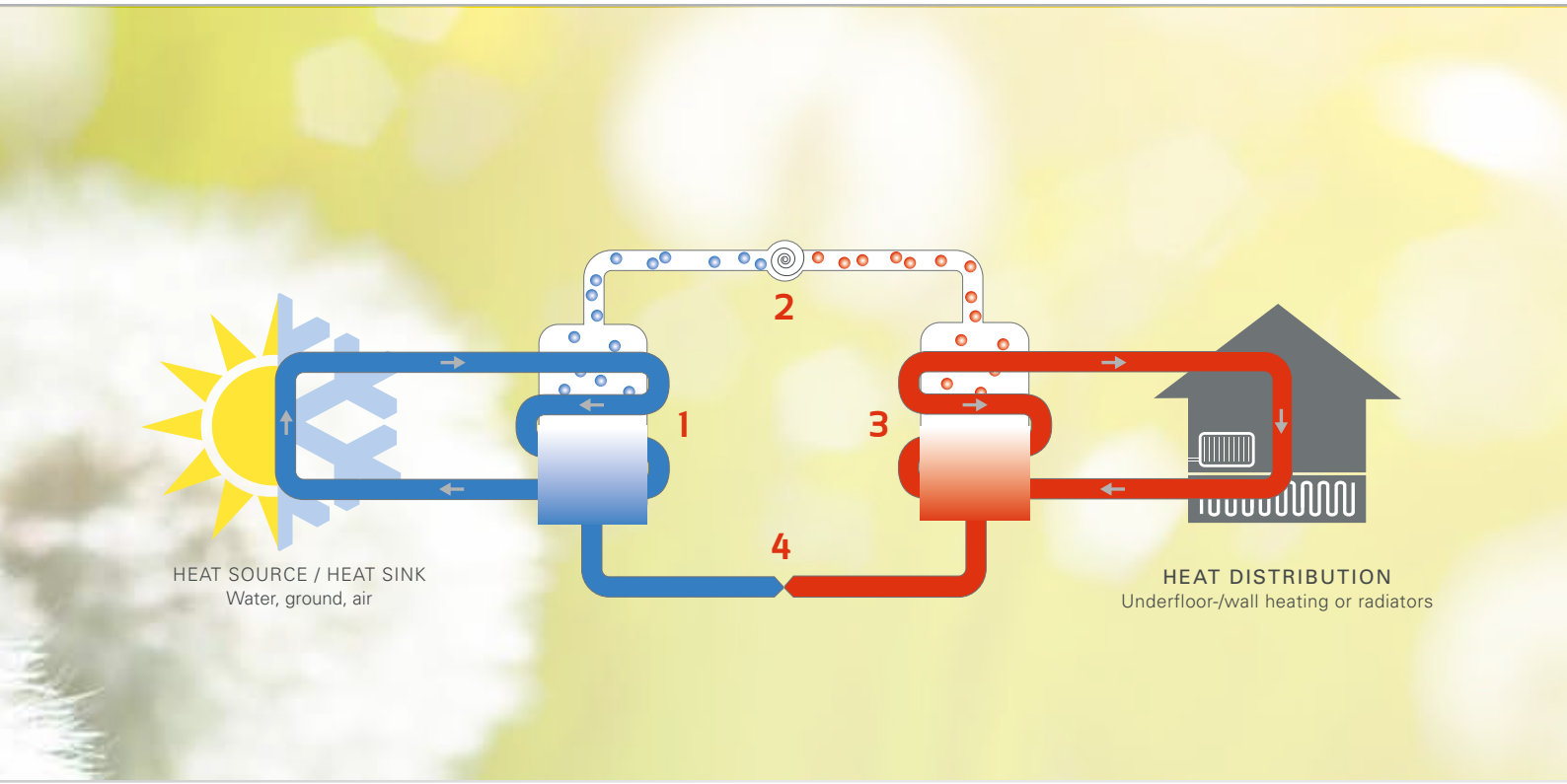
THE HEAT PUMP CYCLE



1 EVAPORATION:

By means of a heat exchanger, the liquid refrigerant extracts energy from the heat source ground, water or air and evaporates with increasing temperature.

2 COMPRESSION:

By the introduction of electrical energy, the now gaseous, but still cold refrigerant is compressed in a compressor and thus heated. The refrigerant leaves the compressor as so-called hot gas.

3 LIQUEFYING / CONDENSING:

The hot gas now reaches the condenser, gives its energy up to the heating system, condenses, and leaves the condenser as warm, fluid refrigerant. Through this, the water in the heating system is heated to the desired temperature.

4 DECOMPRESSION:

The warm, fluid refrigerant is now transported to the expansion valve. In the expansion valve the pressure is abruptly reduced. The temperature of the refrigerant thus also falls abruptly, without any loss of energy. The cold, fluid refrigerant is then reintroduced into the evaporator and the cycle begins again.

Active cooling

OCHSNER heat pumps are also available with a reversible refrigerant cycle: with this, the heat from the building can be pumped out of the building to the “heat sink” and the house actively cooled. The OCHSNER OA-X2-system is used to obtain maximum efficiency.

The heat pump as energy multiplier

A heat pump’s coefficient of performance (COP) indicates how much useful energy is supplied from one unit of drive energy. A COP of 4 means that 4 kW heating energy can be produced with 1 kW of electricity. 3 kW are provided free-of-charge from the sun and the environment.

OCHSNER
HEAT PUMPS

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THE HEAT SOURCES

Air

» Heating ratings from 5 to 60 kW

Due to the further development of the horizontal-split system technology, OCHSNER has made the use of air as a heat source economical as well. Air is available everywhere and in unlimited supply.

This system is also especially suitable for the renovation of heating systems in existing buildings, where retroactive installations in the ground are mostly undesirable or too costly.

Due to OCHSNER's technical innovation, the heat source air can be efficiently used, even at low outside temperatures. High operational safety and low noise levels especially characterise this product.

The heat source air is also very suitable for the plants operated bivalently.

Active cooling

During active cooling operation, the warmth from inside the building is exhausted to the air by means of the external evaporator – which then becomes a condenser.

Ground heat direct expansion DX

» Heating ratings from 5 to 18 kW

The ground is a free-of-charge and abundant heat store and thus represents an ideal heat source.

Using **flat plate collectors**, stored solar energy is mainly used – constantly and completely independent of the time of day or night. If installed correctly, sufficient source energy is available even in the deepest of winters.

Using **direct expansion systems** (also known as direct evaporation), you can achieve the lowest operating costs of all known ground collector systems known today. They use up to **4/5 free environmental energy!**

The chlorine-free and ozone-neutral refrigerant in the heat pump circuit extracts the heat direct from the ground by means of the double-walled, seamless tubes of the flat-plate collector (copper with PE-protective sheath). This takes place during the transition from the fluid into the vapour stage.

Water

» Heating ratings from 7 to 91 kW

If ground water is available at a reasonable depth and in sufficient quantity, one can reach the highest seasonal performance factors. A constant temperature of 8 – 12°C guarantees an optimum heating operation.

Two wells are necessary for this: a **source well** and a **sink well**. The sink well should be located at least 15 metres from the source well in the direction of the ground water flow.

The amount of water necessary for 10 kW heating performance is around 2 m^3 per hour. The availability is to be established by means of a continuous pump test. Certain limiting values for the contents of the water must not be exceeded or fallen below. Therefore, a water analysis is to be carried out. Approval from the water authorities is also necessary.

Active or passive cooling

Water as a heat sink is also suitable both for **active as well as passive cooling** of the building.

Ground heat brine

» Heating ratings from 5 to 72 kW

Using this system, the ground heat is extracted by means of a brine secondary circuit and then transferred to the heat pump.

Brine ground collectors can be laid in three ways:

» If the garden area is sufficient, **flat-plate collectors** are the least expensive solution. The area to be laid is dependent upon the type of construction and the insulation properties of the house as well as the composition of the soil.

» As an alternative, **spirally formed deep-trench collectors** can be installed as they require somewhat less area.

» **Ground probes** can also be inserted in the ground by means of deep drilling. These will normally be placed at around 100 metres depth each and are ideally suitable for buildings with little ground space. Approval from the water authorities is necessary.

Active cooling

During active cooling operation in summer, heat is “pumped” out of the living areas and into the ground by means of the existing heating system. In active cooling operation, the maximum cooling performance is fully available, even after week-long heat waves.

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HEAT SOURCE AIR

Split evaporator Eco

Split evaporator VHS-M
(Millennium® Edition)

Split evaporator VHS

Ambient warmth

The outside air is the ideal heat source if ground water or the ground itself are not available. Ambient warmth is solar energy and is especially suitable as a heat source for retrofitting or for bivalent operation systems.

OCHSNER utilises the heat source air with heat pumps in split construction. With these split appliances, the air heat exchanger (horizontal split-evaporator) is mounted horizontally, these being decisive for efficiency and operational safety. This unit is connected to the heat pump, which is installed in the building and thus protected by means of connecting pipework.

OCHSNER recommends the installation of horizontal split appliances, as these are superior to compact appliances and air-conditioners in heating mode with respect to energy efficiency and noise development. It must especially be ensured that the evaporator is sized for true heat pump operation.

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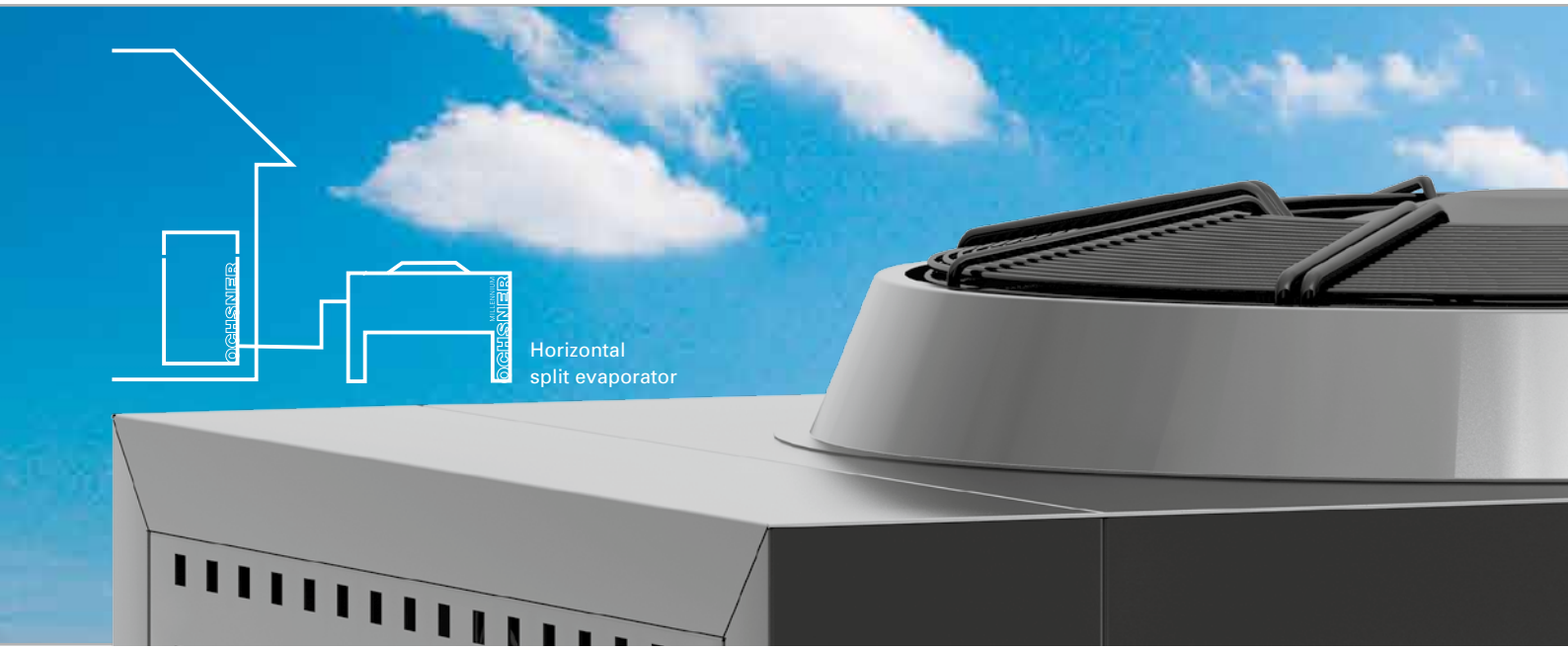
HEAT SOURCE AIR



Heat source air

The Horizontal Split System

The heat pump installation takes place – protected from the weather – inside the building, the evaporator which absorbs the ambient warmth without losses, is installed in the open air. The advantages compared with the compact system: no air ducts, very quiet operation, long life and high economy.

The high-efficiency horizontal split evaporator extracts the necessary amount of warmth from the outside air, whereby an optimised, automatic de-icing system keeps the evaporator, if required, ice-free without using much energy.

Our horizontal split evaporators are supplied in two possible versions: Type VHS with a weather-resistant coating, Type VHS-M (Millennium® Edition) in the exclusive cabinet version.

Due to the sizing and optimum appliance construction, a maximum of warmth is absorbed from the air. Even at extreme temperatures below zero. No other appliance on the market offers such large heat exchanger areas! Low-speed special fans provide whisper-quiet operation with the highest energy efficiency.

Moreover, a continuous evaporator performance adjustment is achieved by means of the fully modulating fan and heat pump operation.

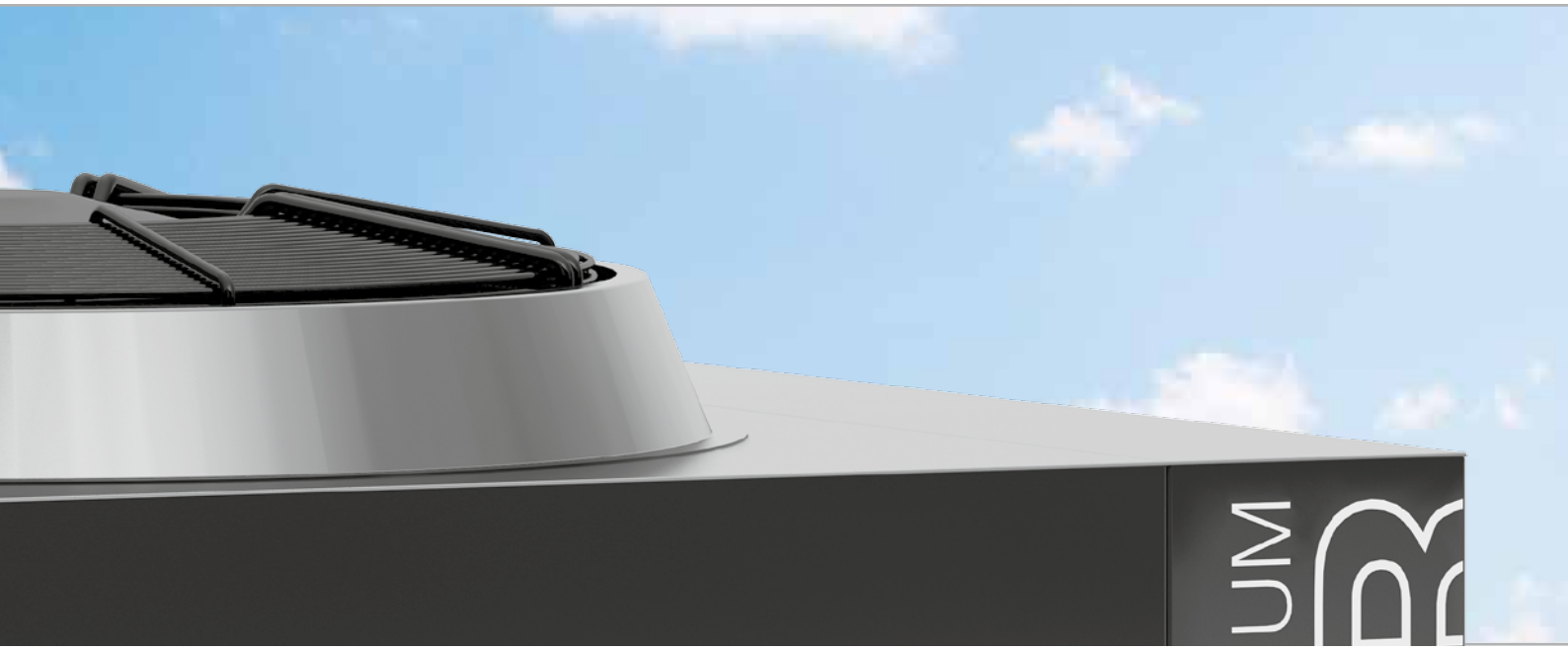
The connection of the externally installed evaporator to the internally installed condenser is very simply carried out by means of two insulated copper pipes and a wiring harness. These are normally laid under the surface of the ground in a duct and are thus, even retroactively (heating system renovation) installed without any problem.

In order to maximise operational safety in extreme weather conditions, “Thermodynamic de-icing“ and “Anti-Bloc“ were developed.

Confirmed peak performances

The heat pump Golf (GMLW) plus, together with the OCHSNER split evaporator reach a COP of 4.4 (peak value – measured with the GMLW 14 plus at A2/W35 and 5 K temperature differential in the heat pump centre at Buchs/Switzerland).

The heating ratings relate to heat pump measurement data under standard conditions (heating performance/COP), taking into consideration the specified tolerances. COP values according to EN14511 with 5 K differential / to EN255 with 10 K differential. Heating ratings to EN14511 with 5 K differential. The system’s energy efficiency and thus running costs are the responsibility of the system installer. The heat pump heating systems are to be installed according to OCHSNER guidelines. No operational guarantee can be accepted for the heat pump in systems which



Performance Ratings Air-Split Systems

Heat pump Golf Maxi plus — **heat source AIR**

		Golf Maxi plus				
Model		**GMLW 9 plus**	**GMLW 14 plus**	**GMLW 19 plus**	**GMLW 25 plus**	**GMLW 35 plus**
Max. flow temperature		65°C				
Norm point A2/W35						
Heating rating	[kW]	8.3	13.2	17.2	21.8	30.3
COP	EN14511/EN255	4.0 / 4.3	4.4 / 4.7	4.2 / 4.4	4.2 / 4.4	4.1 / 4.4
Norm point A2/W50						
Heating rating	[kW]	7.9	12.3	16.8	21.2	27.4
COP	EN14511/EN255	2.8 / 3.0	3.1 / 3.2	3.2 / 3.4	3.2 / 3.4	3.1 / 3.3

Heat pump Golf Midi, Golf Maxi and Standard — **heat source AIR**

		Golf Midi	Golf Maxi			Standard
Model		**GMLW 5**	**GMLW 9**	**GMLW 14**	**GMLW 19**	**GMLW 60**
Max. flow temperature		55°C				
Norm point A2/W35						
Heating rating	[kW]	5.3	8.3	12.4	16.6	58.5
COP	EN14511/EN255	3.9 / 4.3	4.0 / 4.3	3.8 / 4.1	3.9 / 4.1	3.6 / 3.9
Norm point A2/W50						
Heating rating	[kW]	4.6	7.6	11.2	15.1	57.8
COP	EN14511/EN255	2.6 / 2.8	2.5 / 2.6	2.3 / 2.5	2.4 / 2.6	2.5 / 2.6

have not been installed according to OCHSNER guidelines. OCHSNER therefore recommends trained OCHSNER system partners for the heat pump installation. Even in systems which have been installed according to OCHSNER guidelines, the efficiency values can deviate from the manufacturer's data as these are based on measurements taken under standard conditions. Suitable connections are required for heat sources air and direct extraction. User behaviour also plays a decisive role.
In order to protect the fan from external influences such as rain, snow, leaves, etc., we strongly recommend the accessory "split outside-unit cover".

OCHSNER HEAT PUMPS

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HEAT SOURCE GROUND

Golf Midi plus

Golf Maxi (plus)

Ground heat

Here, the solar energy and warmth stored in the earth is extracted and used by means of flat-plate collectors.

Depending on the heat carrier medium in the ground collector, a differentiation is made between the systems brine and direct expansion. In the brine system, a water-antifreeze mixture circulates as the heat carrier medium in the collectors and absorbs the warmth from the ground to transport it to the heat pump.

In the direct expansion system, the secondary brine circuit, consisting of circulation pump, heat exchanger and expansion vessel, can be dispensed with.

This leads to even higher operational safety due to less components, as well as better efficiencies. Flat-plate collectors are used as standard here.

A combination with CO_2 deep-ground probes is also possible.

Performance ratings

Heat pumps Golf Midi plus and Golf Maxi plus — **heat source GROUND DIRECT HEAT EXTRACTION**

		Golf Midi plus			Golf Maxi plus		
Model		GMDW 5 plus	GMDW 8 plus	GMDW 11 plus	GMDW 13 plus	GMDW 15 plus	GMDW 18 plus
Max. flow temperature		65°C					
Norm point G-1/W35							
Heating rating	[kW]	5.3	7.2	10.1	11.9	14.0	17.0
COP	EN14511/EN255	4.1/4.5	4.2/4.6	4.5/4.8	4.4/4.7	4.4/4.6	4.4/4.7
Norm point G4/W35							
Heating rating	[kW]	6.2	8.6	12.1	14.2	16.0	20.8
COP	EN14511/EN255	4.8 / 5.3	5.1 / 5.5	5.1 / 5.5	5.1 / 5.4	5.1 / 5.4	5.2 / 5.6
Norm point G4/W50							
Heating rating	[kW]	5.7	7.3	10.6	12.6	16.0	19.0
COP	EN14511/EN255	3.3/3.6	3.5/3.7	3.6/3.8	3.8/4	3.9/4.1	3.9/4.1

Heat pumps Golf Midi plus and Golf Maxi plus, Maxi, Standard, R — **heat source ground BRINE**

		Golf Midi plus			Golf Maxi plus				Golf Maxi		Standard		R
Model		GMSW 5 plus	GMSW 7 plus	GMSW 10 plus	GMSW 10 plus S	GMSW 12 plus	GMSW 15 plus	GMSW 17 plus	GMSW 28	GMSW 38	OSWP 56	OSWP 96	OSWP 96 R
Max. flow temperature		65°C							55°C				
Norm point B0/W35													
Heating rating	[kW]	5.2	7.1	10.3	10.6	12.1	14.2	16.7	19.9	28.7	43.6	72.6	48.3
COP	EN14511/EN255	4.2/4.6	4.2/4.8	4.6/4.8	4.7/5.1	4.5/4.9	4.4/4.7	4.6/4.9	4.4/4.7	4.4/4.7	4.6/4.9	4.6/4.9	4.6/4.9
Norm point B0/W50													
Heating rating	[kW]	4.8	6.2	9.0	9.6	10.5	13.0	15.2	18.3	25.6	41.7	67.8	45.9
COP	EN14511/EN255	3.0/3.3	3.0/3.3	3.1/3.3	3.2/3.5	3.2/3.4	3.2/3.4	3.3/3.5	3.0/3.1	3.0/3.2	3.2/3.4	3.1/3.3	3.3/3.5

The rating data are based on heat pump measured values under standard conditions (heating rating/COP), taking the stated tolerances into consideration. COP values according to EN14511 with 5 K differential / to EN255 with 10 K differential. Heating ratings to EN14511 with 5 K differential. Further information on page 13.

OCHSNER

HEAT SOURCE WATER

Golf Midi plus

Golf Maxi (plus)

Heat source water

Using ground water as the heat source, heat pumps reach their highest COPs. Ground water has a more or less constant temperature between 8 and 12°C throughout the year. Thus, the temperature level, compared with other heat sources, must only be raised relatively slightly to be able to be used for heating purposes.

The use of ground water as heat source for the heat pump must be approved by the water authority. When applying for a permit, the well-driller, the drilling company or your OCHSNER system partner will be glad to be of assistance.

Several prerequisites must be fulfilled in order to be able to use ground water as a heat source:

- Sufficient quantities of water
- Water quality (analysis)
- Approval by the water authority
- Source and sink wells

Leistungstabelle

Heat pumps Golf Midi plus and Golf Maxi plus, Maxi, Standard, R — **heat source ground WATER**

		Golf Midi plus			Golf Maxi plus			Golf Maxi		Standard		R
Model		GMWW 7 plus	GMWW 10 plus	GMWW 13 plus	GMWW 15 plus	GMWW 19 plus	GMWW 23 plus	GMWW 28	GMWW 38	OWWP 56	OWWP 96	OWWP 96 R
Max. flow temperature		65°C						55°C				65°C
Norm point W10/W35												
Heating rating	[kW]	6.9	9.5	13.8	15.2	19.0	22.6	26.5	37.3	59.9	99.5	63.0
COP	EN14511/EN255	5.3/5.8	5.3/5.7	5.7/6.1	5.6/6.2	5.7/6.1	5.8/6.2	5.4/5.8	5.4/5.7	5.9/6.3	5.9/6.3	5.9/6.3
Norm point W10/W50												
Heating rating	[kW]	6.1	8.4	12.6	14.1	17.3	20.3	25.8	34.4	54.9	89.6	59.7
COP	EN14511/EN255	3.6/3.9	3.7/3.9	4.1/4.3	4.0/4.3	4.0/4.3	4.1/4.3	3.6/3.8	3.5/3.7	3.8/4.0	3.8/4.0	4.1/4.3
Norm point W10/W60												
Heating rating	[kW]	5.8	7.9	11.8	12.9	16.2	19.0	–	–	–	–	57.3
COP	EN14511/EN255	2.8/3.0	2.9/3.1	3.1/3.2	2.9/3.1	3.0/3.2	3.1/3.2	–	–	–	–	3.2/3.3

The rating data are based on heat pump measured values under standard conditions (heating rating/COP), taking the stated tolerances into consideration. COP values according to EN14511 with 5 K differential / to EN255 with 10 K differential. Heating ratings to EN14511 with 5 K differential. Further information on page 13.

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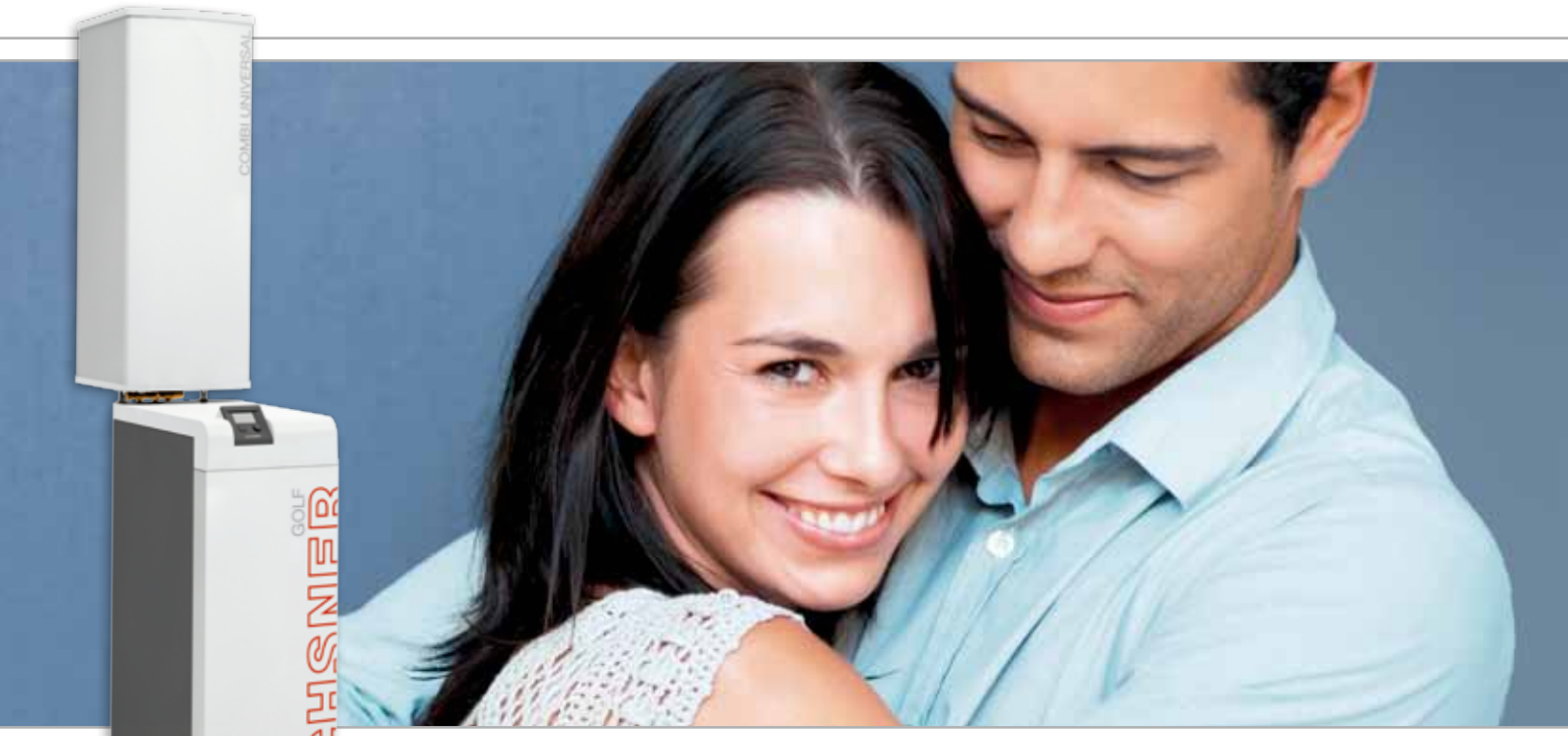
COMPACT SYSTEMS



Combi Universal®2

Combi Universal® 2 - unique compact solution

The Combi Universal® 2 is the ideal solution for heating and domestic hot water preparation when space is at a premium. OCHSNER technology ensures a minimum of operating costs due to the lack of the electric heating rod normally needed in conventional compact heat pumps as support for the heating system*. The heating performance of the Combi Universal® 2 is up to 13 kW based on the OCHSNER Golf series.

Type overview (HS = Heat Source)

HS **air**	HS **ground heat direct**
GMLW 5 GMLW 9 plus	GMDW 5 plus GMDW 8 plus GMDW 11 plus
HS **ground heat brine**	HS **water**
GMSW 5 plus GMSW 7 plus GMSW 10 plus	GMWW 7 plus GMWW 10 plus GMWW 13 plus

Load-bearing walls required for tank mounting

With the Combi Universal® 2, OCHSNER offers a unique compact system

- for every heat source
- for heating and domestic hot water preparation
- for surface heating
  (underfloor and wall heating)
- for radiators in the existing dwelling
- with a flow temperature of up to 65°C
  and a hot water temperature up to 52°C with the heat pump
- with a new, space-saving storage tank
  elegantly designed (110 l stainless steel tank)
- with a modular construction
  for rapid and simple installation
- with an E-rod heater in the hot water tank
  for Legionella safety and 65°C hot water (supplied with heat pump)

* With air systems, a max. 1-3% E-rod operation is foreseen in order to ensure a thermodynamic defrosting when required. A highly economical system operation is thus ensured.

OCHSNER

HOT-WATER HEAT PUMPS

Europa 323 DK

Europa Mini EWP

Domestic hot water preparation - around the clock

Use solar energy at any time of the day or night - in any weather!

For even more efficient domestic hot water preparation OCHSNER recommends the hot water heat pumps of the EUROPA series. The ideal alternative to solar systems and heating boilers! Exclusive to OCHSNER – the choice of hot water heat pumps as split appliances – for external storage tanks of up to 500 litres (large households, commercial use) – or as compact appliances with integrated 300-litre hot water tank.

The hot water heat pump series EUROPA offers the **following decisive advantages:**

» Leading technology
Highest COP ever tested (www.wpz.ch)

» Higher water temperature
A domestic hot water (DHW) temperature of up to 65°C in heat pump operation (without switching in the electrical heating rod) provides you an inexpensive greater supply of hot water if needed.

» Air/exhaust air or ground heat as heat source

» Combination with solar possible

Furthermore, the new Europa 323 DK offers the following unique functions

» Tiptronic plus control with Touch Display

- Ventilation function with integrated fan-speed regulation and timer program
- Solar regulation as standard for solar thermal system supplied on site
- with the Tiptronic plus' Smart Grid Function, the Europa 323 DK is already prepared for Smart Metering and thus for the power network of the future (for decentralized power generation by means of, for instance PV-, wind power-, small-scale hydro-electric systems)
- Heat pump operation with defrost function for deployment down to -5°C air temperature
- Hot-water regulation with switchable Hygiene - Comfort function
- Real time clock

The domestic hot water preparation can, if desired, also be carried out with the heating heat pump. In this case, the hot water is supplied from an external storage tank. The heating regulator ensures that the hot water supply has priority at all times.

An overview of our complete range of models can be found in our "Hot-Water Heat Pumps" brochure or at www.ochsner.com

OCHSNER
HEAT PUMPS

OCHSNER

PRODUCT OVERVIEW

Heat pumps for heating and cooling

Golf MIDI plus

- **Heat sources** water, brine, direct ground expansion, air
- **Heating, domestic hot water preparation**
- **Up to 13.8 kW** heating rating
- **Up to 65°C** flow temperature
- **Ideal for single- and multi-family houses** with low heating requirements

Golf MAXI and Golf MAXI Plus

- **Heat sources** water, brine, direct ground expansion, air
- **Heating, active cooling, domestic hot water preparation**
- **Up to 38 kW** heating rating
- Plus appliances: **up to 65°C** flow temperature

STANDARD und R

- **Heat sources** water, brine and air
- **Heating, active cooling, domestic hot water preparation**
- **Up to 91.4 kW** heating rating
- Type R: **up to 65°C** flow temperature
- **For buildings with high heating requirements**

Split evaporator Eco

- **High-efficiency horizontal evaporator** for split-heat pumps with heat source air for low heat requirements
- **Fan protected against precipitation**
- **Free-standing**
- **Exclusive housing design**

Single-Split evaporator VHS-M (Millennium® Edition)

- **High-performance horizontal evaporator** for split heat pumps with heat source air
- **Exclusive housing design**
- **Leading design,** highest quality materials
- **Efficiency redord with certified test results**
- **Silent operation**
- **Fully modulating** – via OTE-control rotational speed regulated EC-fan
- **OCHSNER Liquid-Control**

Double-Split evaporator VHS-M (Millennium® Edition)

- **High-performance horizontal evaporator** for split heat pumps with heat source air with higher performance
- **Exclusive housing design**
- **Leading design,** highest quality materials
- **Efficiency record with certified test results**
- **Silent operation**
- **Fully modulating** – via OTE-control rotational speed regulated EC-fan
- **OCHSNER Liquid-Control**

Compact System

Combi Universal® 2

- **All heat sources**
- **Heating, active cooling, domestic hot water preparation in one system**
- **Up to 13.4 kW** heating rating
- **Up to 65°C** flow temperature
- **Ideal for low-energy houses, pre-fabricated houses and small houses** with tight space and low hot water requirements
- **52°C hot water temperature** without E-heating rod
- **Rapid charging stainless steel storage tank**
- **with an E-rod heater in the tank** for Legionella safety (supplied with heat pump)

Hot water heat pumps

Europa Mini IWP and Mini EWP

- **Split heat pump** for external storage tanks up to 500 litres
- **For up to 5 person households**
- **IWP:** Heat source air/exhaust air, up to 60°C hot water
- **EWP:** Heat source direct ground heat, up to 60°C hot water

Europa 303 DKL and 323 DK

- **Heat source** air/exhaust air
- **Compact heat pump** with integrated 300 litre storage tank
- **For up to 5 person households**
- **Up to 65°C** hot water
- **303 DKL:** Electronic Tiptronic light control, without solar register
- **323 DK:** Tiptronic Plus control with Touch-Display (see Page 19)

Heat pumps for large buildings and industrial applications

Split evaporator VHS

- **High-performance-horizontal-evaporator** for split-heat pumps with heat source air
- **Silent operation**
- **Fully modulating** – with OTE-control rotational speed-controlled EC-fan
- **OCHSNER Liquid Control** highly precised control by OTE

High capacity heat pumps

- **Heat sources** brine, water and air
- **Heating, active cooling and domestic hot water preparation**
- Heat pumps for high ratings **up to 1000 kW**
- **Up to 65°C** flow temperature
- **Screw- or turbo-compressor**
- **For large commercial, industrial, large-volume residential and municipal buildings**
- **OVi-technology** for highest efficiency

OCHSNER
HEAT PUMPS

OCHSNER

OTE 2 INTERIOR CLIMATE MANAGER

OCHSNER room terminal
with Touch-Display

A question of preference

With the new OTE 2 Interior Climate Manager, OCHSNER is putting the emphasis on intelligent user friendliness when controlling your heat pump. Cutting-edge control technology provides you the highest comfort levels, maximum energy efficiency and the highest operational safety.

Most simple operation in dialogue process:
The clear text display leads you safely through the menu. Graphics depict the system in an easily understood manner.

Alongside special functions for the heat pump, the OTE-control can, if desired, regulate domestic hot water preparation, cooling operation and up to 16 user circuits (heating/cooling). Additional heat generators such as heating boilers (additional module) and solar systems are also controllable.

Smartphone

The new OTE 2.0 features at a glance!

- Full-graphic with clear text display
- Simplest operation
  only two buttons for operating with simple, logical menu structure.
- OCHSNER Room-Terminal with Touch Display
  (capacitive) and integrated web2com Server and App for internet compatible Smartphones or Tablets.
- Even more efficient hot water comfort
  by means of new, adaptive hot-water regulation
- Maximum heat pump operational safety
  due to safety management
- Factory-fitted flow rate monitoring
  and measurement of heat quantity for determination according to the market incentive program possible
- Internet based Telecontrol engineering web2com
  for world-wide access
- Simplest commissioning
  with commissioning assistant

OCHSNER

SPECIALISED CUSTOMER SERVICE

The OCHSNER customer service is always there for you!

Our personal customer support does not end with the sale of a system.
You will continue to be supported competently and reliably by the OCHSNER customer service.

» COMMISSIONING
Our specialised customer service will commission your OCHSNER heat pump system and instruct you on the system operation on site. Your new heat pump system will be adjusted to your individual requirements and conditions.

» MAINTENANCE
In order to safeguard your investment long-term, we recommend a regular servicing of your heat pump.The OCHSNER works customer service examines the condition of the system. This allows permanently low running costs, increases the life of your system and helps prevent malfunctions. A system partner or OCHSNER area sales manager will be happy to advise you of the further advantages of our maintenance packages.

» ACCESSIBILITY
The OCHSNER specialist customer service is available to you on 365 days in the year – also on Sundays and Bank Holidays – area-wide in the main markets. The customer service hotline numbers can be found on our web-site www.ochsner.com

» Spare parts
Our works customer service carries the most commonly required spare parts permanently in their service vehicles. Furthermore, the central spare parts store guarantees the immediate availability of more than 2000 parts.

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W699e P 02/2012

OCHSNER
Wärmepumpen GmbH
(Commercial register)
Krackowizerstraße 4
A-4020 Linz
kontakt@ochsner.at
www.ochsner.at

Main Works
Ochsner-Straße 1
A-3350 Haag
Tel: +43 (0)5 042458
Fax: +43 (0)5 04245-349
Customer-hotline: +43 (0)820 201000
kontakt@ochsner.at
www.ochsner.at

OCHSNER
Wärmepumpen GmbH Germany
Elxlebener Weg 10
D-99310 Arnstadt
Tel: +49 (0)3628 6648-0
Fax: +49 (0)3628 6648-497
Customer-hotline: +49 (0)1805 624763
kontakt@ochsner.de, www.ochsner.de

OCHSNER East
PL 30-198 Kraków, Zakliki z Mydlnik 16
Tel: +48 (0)12 4214527
Fax: +48 (0)12 4212809
kontakt@ochsner.pl, www.ochsner.pl

www.ochsner.com

identity.co.at