
# DOMESTIC HOT WATER

Hot water from the environment.

Wellness of the pleasurable kind,
with state-of-the-art technology.

OCHSNER
The Heat Pump Company

# OCHSNER
# Heat pumps

## 30 SUCCESSFUL YEARS

### **OCHSNER Heat pumps** — 30 successful years

The OCHSNER Wärmepumpen Company was founded in 1978 and since the beginning has been characterised by its environmental orientation, pioneer spirit and innovation. As one of the first manufacturers in Europe, OCHSNER began the first industrial production of heat pumps and is internationally ranked today as one of the technology leaders in the industry. Ever more efficient heat pumps with the highest possible customer usage are the result of decades of research and development.

The full range of products for all heat sources cover every area and ranges from heat pumps for heating, also with heating/cooling function, through industrial large-scale heat pumps up to heat pumps for domestic hot water (DHW).

### STRENGTH FROM TRADITION

The original OCHSNER company was founded in Silesia back in 1872. 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. Notable customers included international plant construction companies, as well as the US-Navy and NASA. Since 1992, Karl Ochsner and his team have been concentrating solely on the heat pump sector.

OCHSNER had the vision of being able to contribute to the future of our common national and global energy situation through the use of environmental energy. This also applies to the reduction of pollution and the conservation of finite resources.

### ADVANTAGE THROUGH TECHNOLOGY

Heat pumps for the various systems are tested and measured in the OCHSNER testing laboratory under all operating conditions occurring in practice. The approvals take place according to the relevant international norms and quality guidelines.

Cutting-edge technical equipment give the scientific and technical personnel the opportunity of continuous product advancement and are the pre-requisites of our technical advantage.

This specialisation, coupled with decades of experience guarantee the operator the highest possible operational safety and reliability.

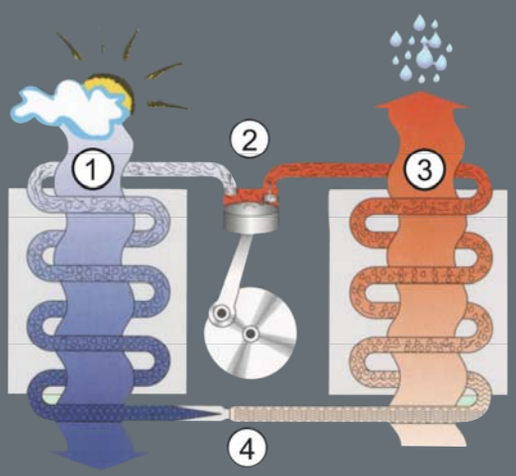
## The principle of the heat pump — environmental heat perfectly utilised

Heat pumps use the sun's energy which is stored in the ground, in water or in the air. They extract the warmth from their surroundings and convert this into useable energy for heating. Ca. 3/4 of the heat energy necessary is gained from the environment, 1/4 is needed in the form of electrical energy to operate the heat pump.

### TECHNOLOGY WITH A FUTURE

Your advantages compared to conventional systems:

- 3/4 ambient warmth free-of-charge
- independence of any type of fossil fuel
- protects the environment, as no $CO_2$ and fine-dust emission
- economic




### THE HEAT PUMP CIRCUIT (see illustration)

#### ① EVAPORATION

By means of a heat exchanger, a liquid refrigerant extracts energy from the heat source ground, water or air, thereby evaporating 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 up. 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.

OCHSNER
The Heat Pump Company

# EUROPA
# Hot-water heat pump

## THE WORLD CHAMPION

### ECONOMIC hot water at any time thanks to innovative technology

The new series of the proven Europa hot-water heat pump.

The new series of the Europa hot-water heat pump **is the only one on the market** offering the following decisive advantages:

- The already excellent performance has been increased even more in the new generation, and is substantially higher than other brands.
- Due to the new rotary piston compressors, water temperatures of up to 65°C are reached in heat pump operation.
- The COPs have additionally been able to be improved. You can thus enjoy even lower domestic hot water (DHW) heating costs, and more hot water than before.
- The highest COP ever measured (**www.wpz.ch**).

#### SPLIT- or COMPACT APPLIANCE

Exclusively to OCHSNER – the heat pump is available either as a **SPLIT APPLIANCE** for external DHW storage tanks, or as a **COMPACT APPLIANCE** with integral 300 litre DHW tank, as well as for heat source ground.

#### THE "CLEVERER" SOLAR SYSTEM

Heat pumps use the solar energy stored in the environment especially economically, and with relatively low investment. This is why its combination with solid-fuel furnaces, or oil and gas heating systems, is so useful.

### MORE than just hot-water heating

The **Europa multifunctional appliances** can dry, cool and provide corresponding ventilation.

- *Example A (see Fig. above)*
  **Type Europa Mini IWP, 303.1 and 313.1**

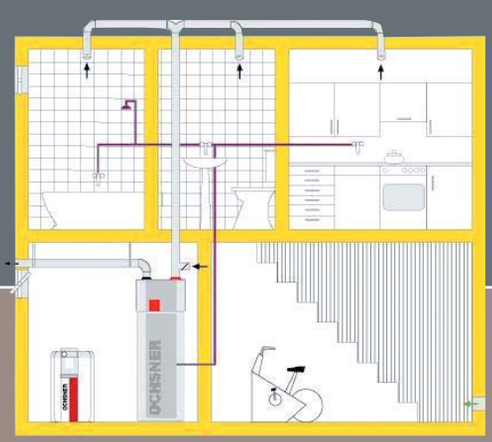
  - installation in heating room
  - hot-water heating from room air
  - added benefit store room or wine cellar cooling of your choice

- *Example B (see Fig. above)*
  **Type Europa Mini IWP, 303.1 and 313.1**

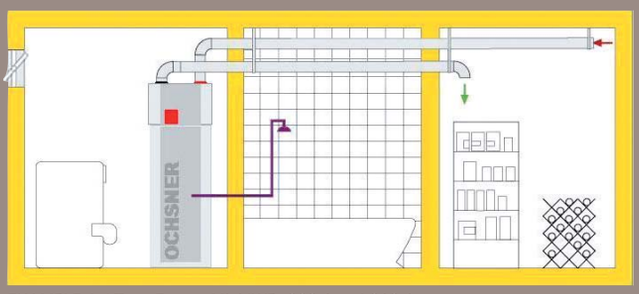
  - installation in laundry room
  - hot-water heating from room air
  - added benefit – drying of washing in room, decalcified water for steam irons
  - high dehumidification capacity

- *Example C (see Fig. below)*
  **Type Europa 313.1** / living space ventilation as exhaust-air system

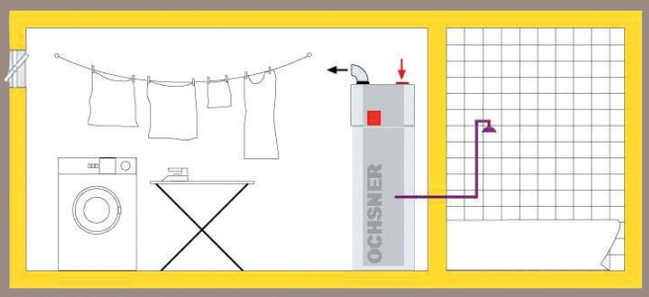
  - installation in utility room with heating heat pump
  - heat recuperation from exhaust air for hot-water heating
  - added benefit – living space ventilation (hygienic single-duct system). Exhaustion of laden, moist air from damp rooms (bathroom, WC, kitchen) and controlled fresh-air entry using adjustable wall-vents in living area, hallway or staircase.




EXAMPLE C / Type Europa 313.1



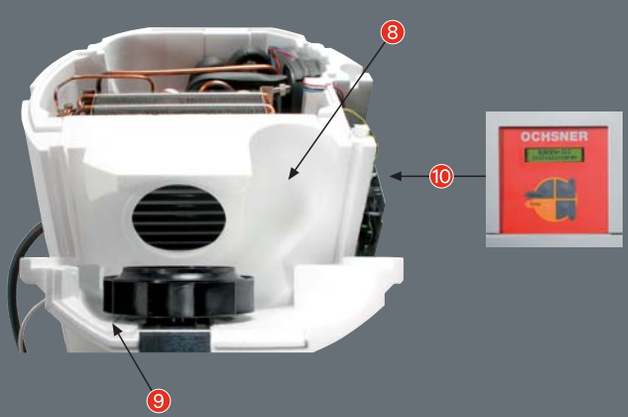

EXAMPLE A / Type Europa Mini IWP, 303.1 and 313.1




EXAMPLE B / Type Europa Mini IWP, 303.1 and 313.1

## State-of-the-art TECHNOLOGY for your comfort *(see Fig. below)*

1. High-performance rotary piston compressor for water temperatures up to 65°C.
2. Robust charge pump in drinking-water quality, highest service life, even with poor water quality.
3. EPS housing, very good noise and heat insulation.
4. Innovative, flexible and heat-insulated refrigerant pipework provides lowest running noise and vibration.
5. Hot-gas defrosting of the evaporator for safe operation below 0°C air-inlet temperature (Europa 313.1).
6. High-performance evaporator with highest heat exchange and safe operation at low air temperatures.
7. Stainless steel plate heat exchanger for highest COPs.
8. Aerodynamically optimised spiral housing
   > highest fan efficiency
   > lowest internal pressure losses
9. Radial fan with sufficient pressure to be directly connected to a ventilation system.
10. Large-scale display electronics with timer programs and hot-gas defrost control (Europa 313.1).



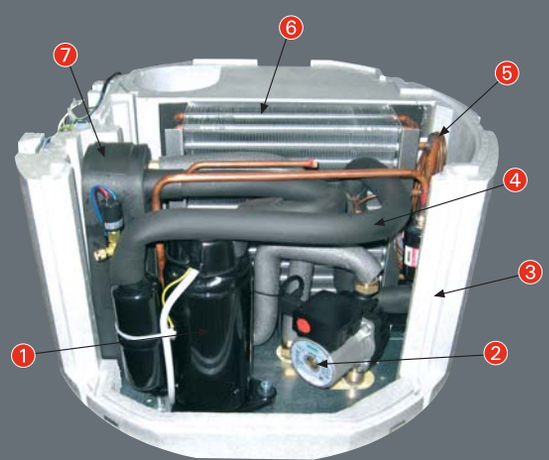

## An investment for the FUTURE

High-quality components for total reliability

SAFETY REFRIGERANT
A chlorine-free, absolutely ozone-neutral and also non-flammable *safety refrigerant R134a, and R407C.* These provide highest COPs.
The hot-water heating takes place by means of a high-quality internal plate heat exchanger and the integral charge pump.

DHW STORAGE TANK
*Quality DHW storage tanks* of 300 litres capacity are used in the Combi-Versions. These are doubly vacuum-enamelled for long-term corrosion protection, optimally insulated using CFC-free polyurethane and fitted with two magnesium sacrificial anodes (*for long life-span*)! A smooth-tube register is also integrated into the tank for the use of a further heat source (such as a solar system or solid-fuel furnace).

E-ROD HEATING ELEMENT
In case of a temporary increase in DHW requirements, or as a standby, the Compact appliance tanks are fitted with an integral E-rod heating element. The maximum hot-water temperature of 65°C can also be reached in heat pump operation, without the element.




OCHSNER
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# Hot water from AIR/EXHAUST AIR/GROUND

## THE COMPLETE RANGE

### Europa Mini IWP

**SPLIT APPLIANCE**
- external tank up to 500l
- for up to 5-person households
- water temperature up to **65°C** in heat pump operation
- ready-to-run
- simple installation
- small space requirements
- air ducting up to 20m possible
- internal heat exchanger
- tank charging by integral circulation pump
- Legionella switching with the heat pump

**AREAS OF USE**
- hot-water heating
- store room cooling
- cellar dehumidifying
- auxiliary heater using buffer tank
- energy supply for passive solar house
- combination with existing pellet-, solar- or furnace systems possible

hot water from **AIR/EXHAUST AIR**


### Europa 313.1

**COMPACT APPLIANCE**
- integral 300l tank
- for up to 5-person households
- water temperature up to **65°C** in heat pump operation
- ready-to-run
- simple installation
- with immersion sleeve for boiler charge thermostat
- with register for external heat source
- E-rod element standard fitting
- air ducting up to 20m possible
- 2 magnesium sacrificial anodes standard fitting
- Legionella switching with the heat pump
- **Tiptronik E controls:** heat pump, additional boiler charge pump, E-rod element, Legionella switching, ventilation period switching
- adjustable flow rate
- hot-gas defrosting for air-intake below 0°C

**AREAS OF USE**
- hot-water heating
- store room cooling
- cellar dehumidifying
- ventilation function

hot water from **AIR/EXHAUST AIR**

### Europa 303.1

**COMPACT APPLIANCE**
- integral 300l tank
- for up to 5-person households
- water temperature up to **65°C** in heat pump operation
- ready-to-run
- simple installation
- with immersion sleeve for boiler charge thermostat
- with register for external heat source
- E-rod element standard fitting
- air ducting up to 20m possible
- 2 magnesium sacrificial anodes standard fitting
- Legionella switching with the heat pump

**AREAS OF USE**
- hot-water heating
- store room cooling
- cellar dehumidifying

hot water from **AIR/EXHAUST AIR**


## Europa 500 IW

- high-performance **SPLIT APPLIANCE**
- external storage tank up to 1,000 l
- for household and commercial use
- up to 2,000 l hot water (at **52°C**) per day
- ready-to-run
- simple installation
- small space requirements
- air ducting up to 7m possible
- passive defrost mechanism
- suitable for mounting under flying roof

**AREAS OF USE**
- hot-water heating
- large households
- industry, catering
- swimming pool heating

hot water from **AIR/EXHAUST AIR**


## Europa Mini EWP

**SPLIT APPLIANCE**
- external tank up to 500l
- for up to 5-person households
- water temperature up to **60°C** in heat pump operation
- ready-to-run
- simple installation
- small space requirements
- with 75 m Cu-ground collector for **sourcing ground heat from the garden**
- internal heat exchanger
- tank charging by integral circulation pump
- Legionella switching with the heat pump

**AREAS OF USE**
- hot-water heating with high efficiency
- auxiliary heater using buffer tank
- energy supply for passive solar house
- combination with existing pellet-, solar- or furnace systems possible

hot water from **AIR/EXHAUST AIR**


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The Heat Pump Company

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