KRONOTERM 1976

HEAT PUMPS

# ESSENTA SANITARY DHW HEAT PUMP

*New definition of efficiency*

## BENEFITS

***ESSENTA is designed for those who want more – more comfort, more hot water, more freedom – with lower costs. Whether you are a family with small children, a couple with greater needs, or an entrepreneur requiring an efficient and reliable system for your business – ESSENTA system ensures an abundance of hot water, even when the number of users increases.***

***A New Generation of Comfort***
ESSENTA ensures comfort for every home. You will never run out of hot water again. With a capacity of up to **530 liters** (at 40 °C), it reliably meets the needs of both small and large families, as well as apartments and commercial spaces with moderate hot-water demand. Thanks to its innovative design with a structurally separated compressor section and aerodynamically shaped interior, ESSENTA is one of the quietest devices in its class.

***A new generation of quiet***
With a structurally separated compressor section and an aerodynamically designed interior, ESSENTA is one of the quietest devices in its class. The air flow is designed to be unobstructed, and the fan operates at lower speeds. This reduces noise and extends the device's lifespan. In the room where it's installed, you'll hardly notice it running – yet hot water will always be ready.

***Simplicity that works for you***
ESSENTA adapts to your space – not the other way around. **Install it, turn it on, and forget about it.** Smart, flexible connections enable quick installation, even in tight spaces or directly against a wall, without restricting airflow.

User-friendly controls with advanced features to meet the needs of even the most demanding users. Designed for your convenience, ensuring hot water is always available – no complex decisions or extra work required.

***Long-term Savings and Sustainability***
ESSENTA operates with exceptional efficiency, using up to 75% less energy compared to traditional water heaters. The savings are significant. The unit is designed for **a long service life** and represents a reliable investment for the future. Efficiently cools nearby spaces while in operation and uses surplus solar energy to heat domestic hot water. Maximize your savings, avoid using the furnace in summer, reduce $CO_2$ emissions, and contribute to a sustainable future.

**AFT™**
**AirFlow Technology**

The aerodynamic design reduces air resistance, increases fan efficiency, reduces noise, and extends the lifespan of the unit.

**SPF™**
**Smart Placement Flexibility**

Angled connections and modular design allow installation as close as 20 cm from the wall, with flexible air intake and exhaust – ideal for basements and utility rooms.

**MCS™**
**MultiConnect System**

Extended connectivity options with other heat sources (gas, oil, pellets, solar energy), BMS systems, and smart grids.

**SC™**
**SmartCost**

High efficiency and low electricity consumption with the option for daily and weekly programming allow for additional savings with multi-tariff billing.

**OHS™**
**Optimal Hygiene System**

A comprehensive protection system ensures the safe and long-lasting use of domestic hot water – an enamelled buffer tank, dual magnesium anode, and external condenser prevent limescale and bacteria.

**EAS™**
**Easy Access System**

Top access through a thoughtfully designed cover allows for easy servicing even in rooms with lower ceilings.

**AFA™**
**AirFlow Adapt**

The intelligent air capture system allows switching between indoor, outdoor, or exhaust air, ensuring quiet and efficient airflow in all configurations.

**NMS™**
**Noise Management System**

An advanced system with optimized airflow, insulation, and intelligent design ensures exceptionally low noise levels.

**IHS™**
**Insta Heat System**

Rapid heating with the help of a built-in 1.5 kW heater and boost function for immediate preparation of larger quantities of hot water with temperatures up to 75 degrees Celsius.

**Low GWP**
**Global Warming Potential**

The heat pump with eco-friendly refrigerant R290 (GWP 0.02) has minimal environmental impact.

## ESSENTA SYSTEM

ESSENTA is a device you can simply set and forget. Once installed and set, it quietly and reliably ensures a **constant supply of hot water**. Operating costs are low and almost unnoticeable - just like the device itself in everyday life.

## INNOVATIVE TECHNOLOGICAL DESIGN

The special design allows **air to circulate freely**, while the fan operates at lower speeds. This reduces noise and extends the lifespan of the device. The smart system allows you to choose the air source – indoor, outdoor or exhaust air. Advanced connectivity allows integration with other heat sources, such as biomass boilers and oil furnaces, as well as with smart grids.

## EASY TO USE

The pump also boasts simple operation, the result of our own knowledge and development, which enables not only **efficient control** but also many useful solutions for the end user.

**Advantages:**
- automatic switching between sources,
- operation of the pump in a special mode,
- ready for smart electrical grids, different tariffs, SG ready
- calculates electricity consumption and cost,
- BMS.

**Connectivity** (available end of 2026)**:**
- CLOUD,
- mobile app.

## KRONO-FLEX

The ESSENTA heat pump features a **flexible air intake and exhaust system** (KRONO-FLEX). The system allows optimal adjustment to suit the space. The innovative design allows for easy adaptation of the intake and exhaust locations based on the device's placement. This greatly simplifies the installation of the heat pump and enhances its overall efficiency:

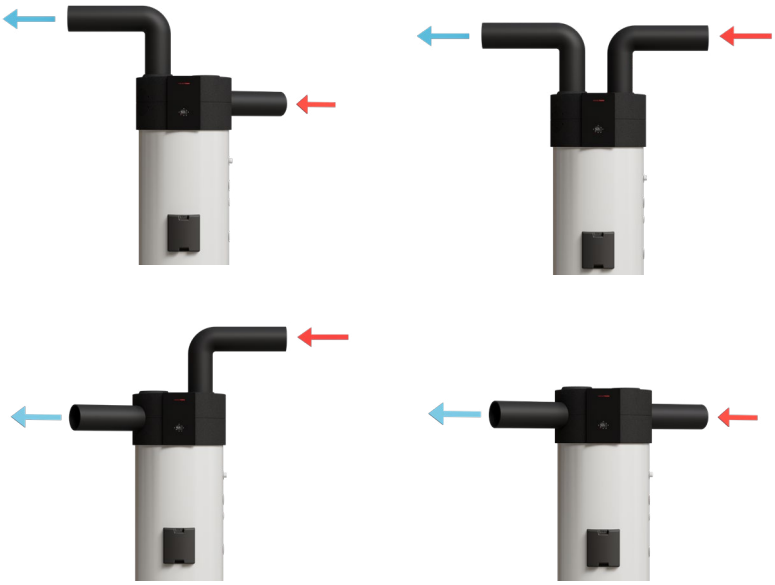
- **Spatial arrangement:**the device intakes and returns air in the same room where it is installed. Directing air ducts ensures optimal circulation of warm and cool air. This prevents mixing of intake and exhaust air.
- **Ducted Mode:**air is drawn from one room and exhausted into another, allowing extra cooling of adjacent spaces such as storage rooms, basements, or garages.

A++ **4.16 COP** HEATING NUMBER **530 l** USABLE WATER*

W: 710, H: 1813 mm

* Quantity of mixed water at 40 °C

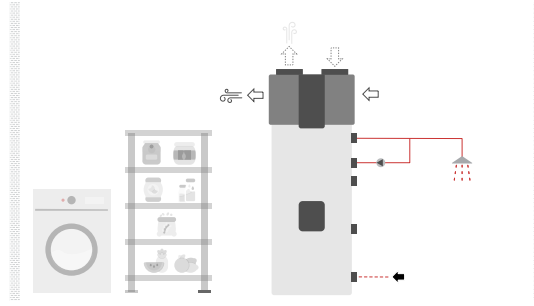

**KSM LITE**



## INSTALLATION DIAGRAM

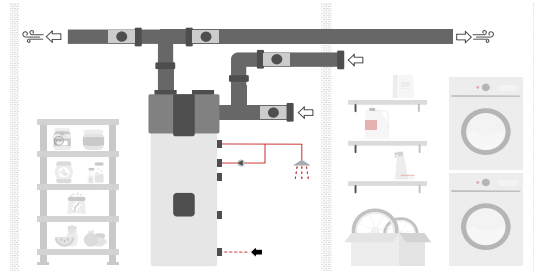
### ROOM INSTALLATION

ESSENTA utilizes heat from **the ambient air** while simultaneously returning pleasantly cool and dehumidified air to the space. An excellent solution when the heat pump is located in a space that requires cooling and dehumidification (cellar, storage room,...).



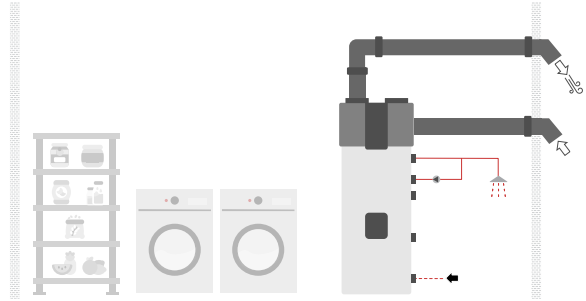
### AIR SOURCE SWITCHING

The system allows for selection: air can be drawn in from and returned to the same room, an adjacent room, outdoor air or **a combination**– depending on where you want cooling.



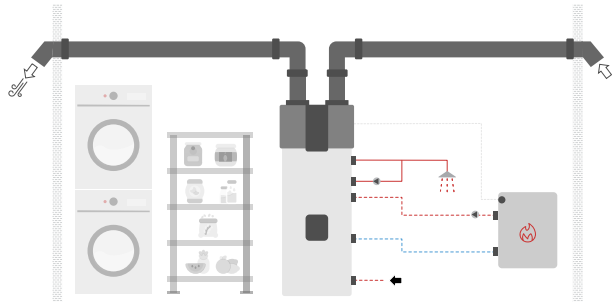
### DUCT INSTALLATION

ESSENTA can be installed in one room, while it draws in and returns air to another room via ducts. Thus, **it does not affect the climate of the room** where the device is installed.



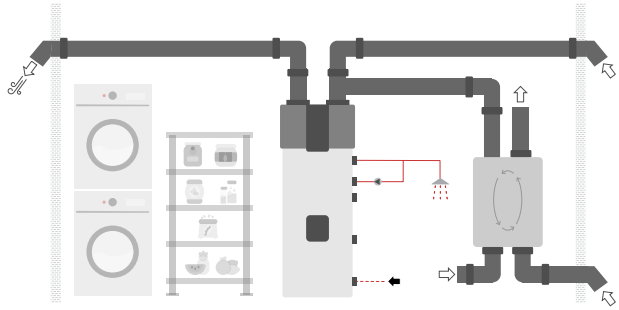
### CONNECTION WITH BIOMASS FURNACE

ESSENTA **complements pellet, wood, or wood chip boilers**. In summer, it provides hot water without unnecessary burning, while in winter, it reduces fuel consumption and adds comfort.



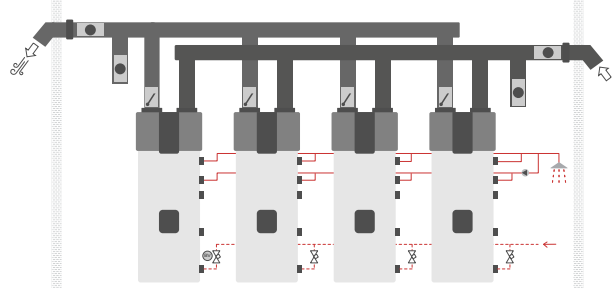
### EXHAUST AIR FROM HEAT RECOVERY

The heat that would otherwise escape through **the ventilation system**, ESSENTA converts into energy for water heating, while returning cool air to the exhaust of the heat recovery system.



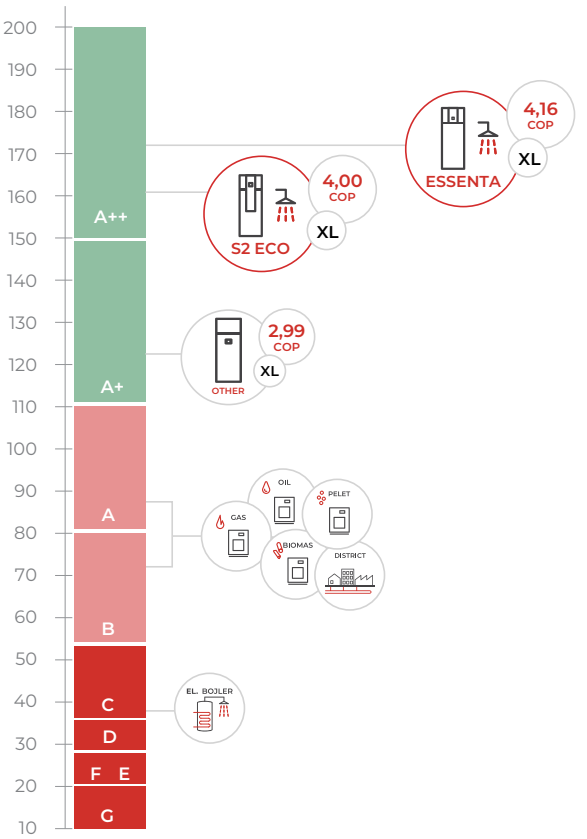
### CASCADE CONNECTION

Multiple ESSENTA units can be connected in a cascade. They integrate harmoniously according to consumption and together ensure sufficient hot water even for **larger buildings**, such as multi-family houses, sports centers, or businesses.



## OUTSTANDING EFFICIENCY

With an exceptional coefficient of performance (COP) of 4.16 ESSENTA generates more than four kilowatts of heat from just one kilowatt of electricity. This efficiency means up to 75 % lower energy use compared to conventional water heaters, which significantly lowers costs, reduces impact on the environment and ensures sustainable comfort for years to come.

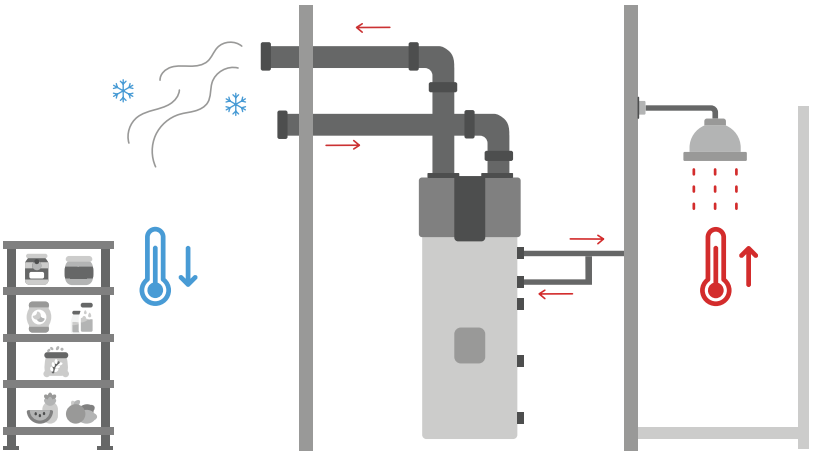



## ONE SOLUTION FOR HOME, LEISURE, AND BUSINESS

ESSENTA is a smart choice for any home – even with high water consumption. With its large hot water storage capacity and scheduling options, it's ideal for families, apartments, cottages, and holiday homes where hot water must always be available. It also performs reliably in salons, clinics, sports clubs, and other commercial spaces where stable water temperature is essential for smooth operation.

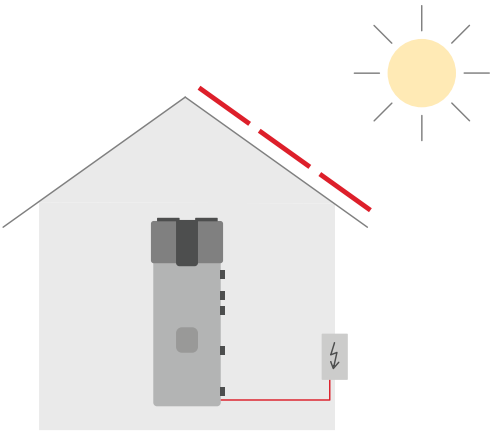
## HEATS WATER, COOLS AIR

While heating water, ESSENTA extracts heat from the air. This way, it cools and dehumidifies nearby spaces - such as storage rooms, basements or garages - at no extra cost. This effect is particularly welcome where a lower temperature is desired – for example, for storing winter supplies or other sensitive products. Cooling is silent, consumes no additional energy, and requires no user intervention. This process generates condensation, which you can easily use to water your plants.



## HOT WATER STORAGE WITH SOLAR POWER

When the building has its own electricity source, such as a solar power system, ESSENTA **intelligently uses surplus electricity** to heat domestic water. This further lowers costs and increases the energy self-sufficiency of your home or business.



| TECHNICAL SPECIFICATIONS OF THE SYSTEM | Unit | ESSENTA 300 |
|---|---|---|
| **ELECTRICAL DATA** | | |
| Rated voltage | **V/Hz** | 230/50 |
| Rated electrical power | **W** | 500* |
| Max electrical power | **W** | 2170 |
| Electrical power Electric heater | **W** | 1500 |
| Fuses | **A** | 16 |

* maximum power (without electric heater at A20W53)

| | | |
|---|---|---|
| **COMMUNICATION** | | |
| Connection to BMS | | Modbus RTU, RS 485 |
| Connection to the internet | | Wi-fi |
| **COOLING SYSTEM** | | |
| Refrigerant - type | | R290 |
| GWP refrigerant (refrigerant heating global warming potential) | | 0,02 |
| Refrigerant - quantity | **kg** | 0,15 |
| **DIMENSIONS AND MASS - GROSS** | | |
| Dimensions (W x H x D) | **mm** | 755 x 1975 x 735 |
| Mass | **kg** | 166 |
| **DIMENSIONS AND MASS - NET** | | |
| Dimensions (W x H x D) | **mm** | 710 x 1813 x 740 |
| Mass | **kg** | 148 |
| **RANGE OF OPERATION** | | |
| Water (heat pump only) | **°C** | 65 |
| Water (heat pump + additional electric heater) | **°C** | 75 |
| Air | **°C** | -10 / 45 |
| **INFORMATION FOR DHW TANK** | | |
| Volume | **l** | 290 |
| **CONNECTIONS DHW TANK** | | |
| Cold and hot water | **'** | G 1 |
| Recirculation tap water | **'** | 3/4 |
| Flow and return, external heat source | **'** | 1 |
| Condensate drain (Φ) | **mm** | 16 |
| **DEVICE** | | |
| Heat source | | air |
| El. heater [KW] | **kW** | 1,5 |
| Air duct fittings | **DN** | 160 |
| Air flow – nominal (indoor installation, ambient air) | **$m^3/h$** | 400 |
| Air flow - nominal (connection with outdoor air - duct connection) | **$m^3/h$** | 400 |
| Maximum available external pressure drop - nominal flow (duct connection) | **Pa** | 207 |
| **EFFICIENCY - INFORMATION CAPACITY BASED ON EN 16147 IN DELEGATED REGULATION (EU) 812/2013** | | |
| Load profile hot sanitary water | | XL |
| **INFORMATION CAPACITY FOR OPERATION WITH INTERNAL AIR A20/W10-53,5 (INLET AIR AND TEMPERATURE AMBIENT 20 °C) - AVERAGE, COLD AND HOT CLIMATE CONDITIONS** | | |
| Coefficient of Performance (COPdhw) | | 4.16 |
| Heating time | **h: min** | 8: 45 |
| Consumption electricity heating | **kWh** | 3.38 |
| Standby Power Input (Pes) | **W** | 27 |
| Maximum volume of usable water at 40 °C | **l** | 393 |
| Energy efficiency water heating (ηwh) | **%** | 172 |
| Annual consumption of electricity (AEC) | **kWh/year** | 975 |
| Rated heating capacity | **kW** | 1.57 |
| **ENERGY EFFICIENCY CLASS BASED ON REGULATION (EU) ŠT. 812/2013** | | |
| Energy efficiency class for internal air demand | | A++ |

## CONTINUING THE TRADITION SINCE 1976

**This family-run company from Slovenia has spent the past 50 years developing a strong reputation among the world's top few producers of state-of-the-art heat pumps. Today the KRONOTERM name means unrivalled excellence, dependability, and friendliness.**

## FAMILY, TRADITION, AND COMMITMENT TO QUALITY

The founder of this family company, Rudi Kronovšek, developed his first heat pump in 1976 for heating domestic hot water. The 1990s saw his workshop evolved into a company. At the turn of the millennium, the company offered its first heat pumps, soon followed by deliveries to European markets. Today it is making headway in the demanding markets of Austria, Italy, Germany, and Switzerland.

## DEVELOPER AND MANUFACTURER IN ONE

KRONOTERM provides solutions that address fundamental challenges in heating and cooling. With in-house research, development, and production, it ensures quality control over all components. This lets it respond to all questions immediately – from planning and delivery all the way to device installation and maintenance.

## ALWAYS RESPONSIVE.

KRONOTERM supports the user at every step – from informed decision-making and prudent planning to safe installation and long-term carefree use. A comprehensive support system enables quick access to information and timely resolution of any potential issues.


ehpa

HEAT PUMP KEYMARK

ISO 9001 BUREAU VERITAS Certification

N° SL21427Q

I FEEL SLOVENIA Ambassador

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