HOME-HW

Heat Pump Heat Recovery Unit with Hot Water System

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FOCUS DOGU

For the Future of Productivity

With our R&D investments and strong team that lead the air conditioning sector, we are where high energy efficiency devices are developed.

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GENERAL OVERWIEW

Thanks to the integrated heat pump, this unit provides fresh air to a home of up to 100 m^2 while ensuring comfort by delivering conditioned air. Additionally, its specially designed cooling circuit heats the water in a 200-liter tank within the unit, meeting the hot water needs of a family of 4-5 people. Alongside these benefits, the unit uses the eco-friendly R290 (Propane) refrigerant with a low Global Warming Potential (GWP), reducing its carbon footprint.

- Hot water for 4-5 People
- 1,58 kW
- 2 kW
- 350 m3/h

STANDARD FEATURES

- EC Fan
- Plastic Heat Recovery
- %100 By-pass Damper
- Temperature Sensor (3 pcs- O.A.-R.A.-S.A.)
- Water Temperature Sensor
- Water Level Sensor
- Electric Water Heater
- Differential Pressure Switch (DPS)
- G4(ISO COARSE) Filters
- App Control with Wi-fi

OPTIONAL FEATURES

- CO2 Sensor
- Humidity Sensor
- Duct Type Electrical Pre-Heater
- Constant Flow
- Outdoor Damper

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COMPONENTS

① PLASTIC HEAT EXCHANGER

The high-efficiency polypropylene counterflow heat exchanger is designed for superior heat transfer and includes a special application for frost protection. Due to its structural properties, it is corrosion-resistant and lightweight, ensuring easy installation. Since plastic is an insulator, there is no risk of electrical leakage.

② EXHAUST FAN (EC PLUG)

The EC Plug exhaust fan in HOME-HW units ensures the extraction of stale air from the space, improving indoor air quality. The system includes maintenance access panels on the casing, allowing easy access to the fans for service and maintenance.

③ G4 FILTERS

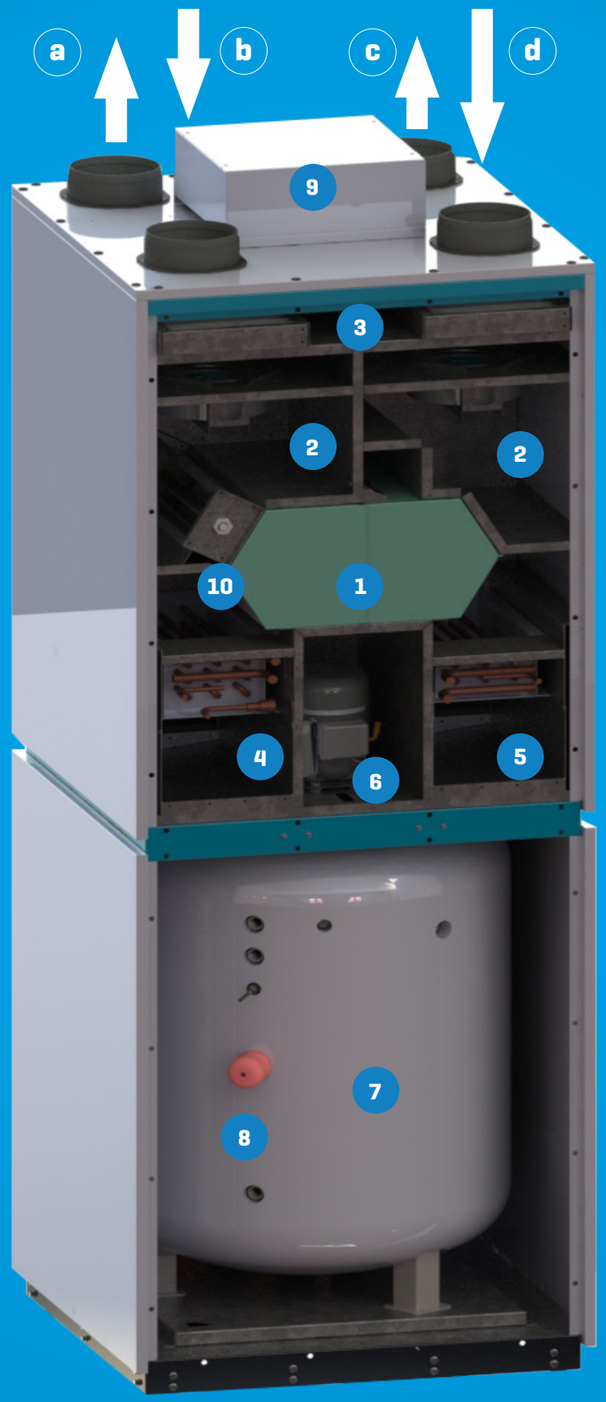
The unit is equipped with ISO Coarse 55% (G4) type filters at both exhaust and fresh air intakes. Optional G4 panel filters are available. These filters protect the primary heat exchanger by maintaining cleanliness, ensuring efficient operation. The filter contamination level can be monitored through the control panel and, optionally, via differential pressure sensors. The filters are washable and reusable.

④ CONDENSER

The HOME-HW condenser recovers waste heat to improve the efficiency of both hot water and air heating. By utilizing waste heat, it minimizes additional energy consumption, reducing fuel or electricity usage and lowering carbon emissions. It is highly resistant to corrosion and designed for long-term operation.

⑤ EVAPORATOR

The HOME-HW evaporator enables heat absorption by allowing the phase change of a low-temperature refrigerant. The captured heat is then transferred to the hot water system and air circulation. This system operates on a sustainable principle by utilizing natural energy sources.



- (a) Exhaust Air
- (b) Outdoor Air
- (c) Supply Air
- (d) Return Air

⑥ COMPRESSOR

The HOME-HW compressor increases the pressure of the refrigerant, optimizing heat transfer efficiency and enhancing hot water production. It operates with propane (R290) as the refrigerant, allowing for waste heat recovery, reduced energy consumption, and a lower carbon footprint.

⑦ HOT WATER STORAGE TANK

The HOME-HW hot water tank stores heated water, ensuring availability when needed. It operates in integration with the heat pump, enhancing energy efficiency and ensuring a continuous supply of hot water. The tank is designed to optimize energy consumption by integrating with the heat source. It features high-quality insulation to minimize heat loss and is corrosion-resistant, durable, and hygienic.

⑧ ELECTRIC WATER HEATER

The HOME-HW electric water heater is a supplementary component that converts electrical energy directly into heat to ensure a continuous hot water supply. It is activated when the condenser alone is insufficient for heating. This user-friendly component is designed to be durable, corrosion-resistant, and hygienic.

⑨ CONTROL PANEL

The HOME-HW control panel is an electrical and electronic automation system that regulates the heating process. It optimizes energy use, ensures precise water temperature control, and guarantees safe operation. It operates with an IoT-enabled smart control system, allowing remote monitoring and control.

⑩ 100% BYPASS DAMPER

The HOME-HW bypass damper is a control mechanism used for frost protection and free cooling. It allows air to pass directly through the heat exchanger or, when required, diverts airflow through the bypass path, optimizing system performance based on environmental conditions.

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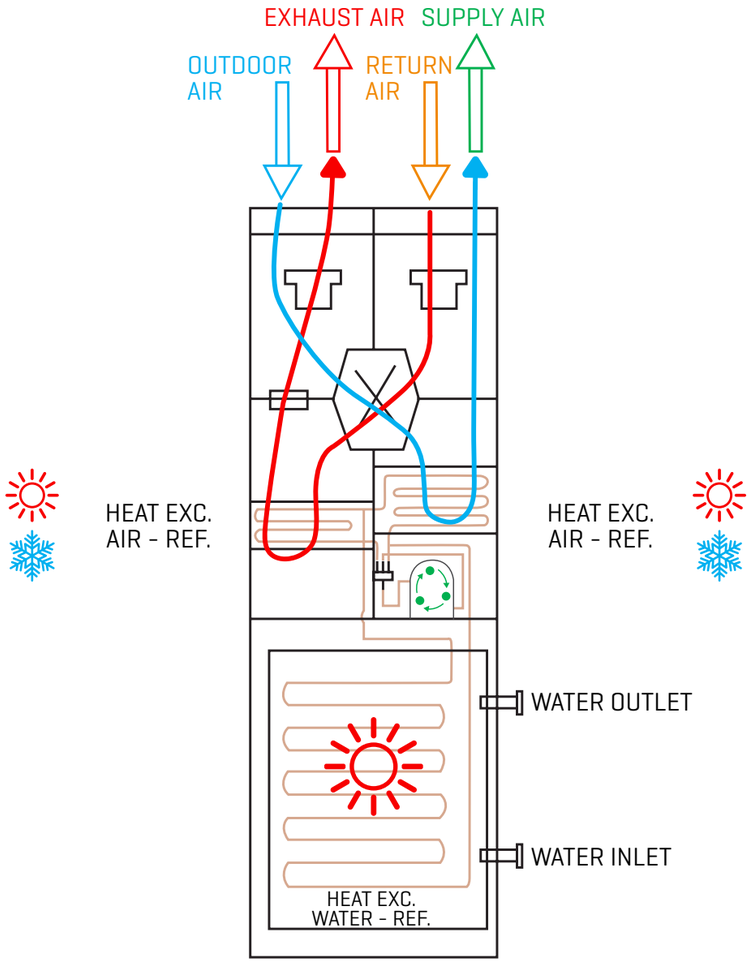
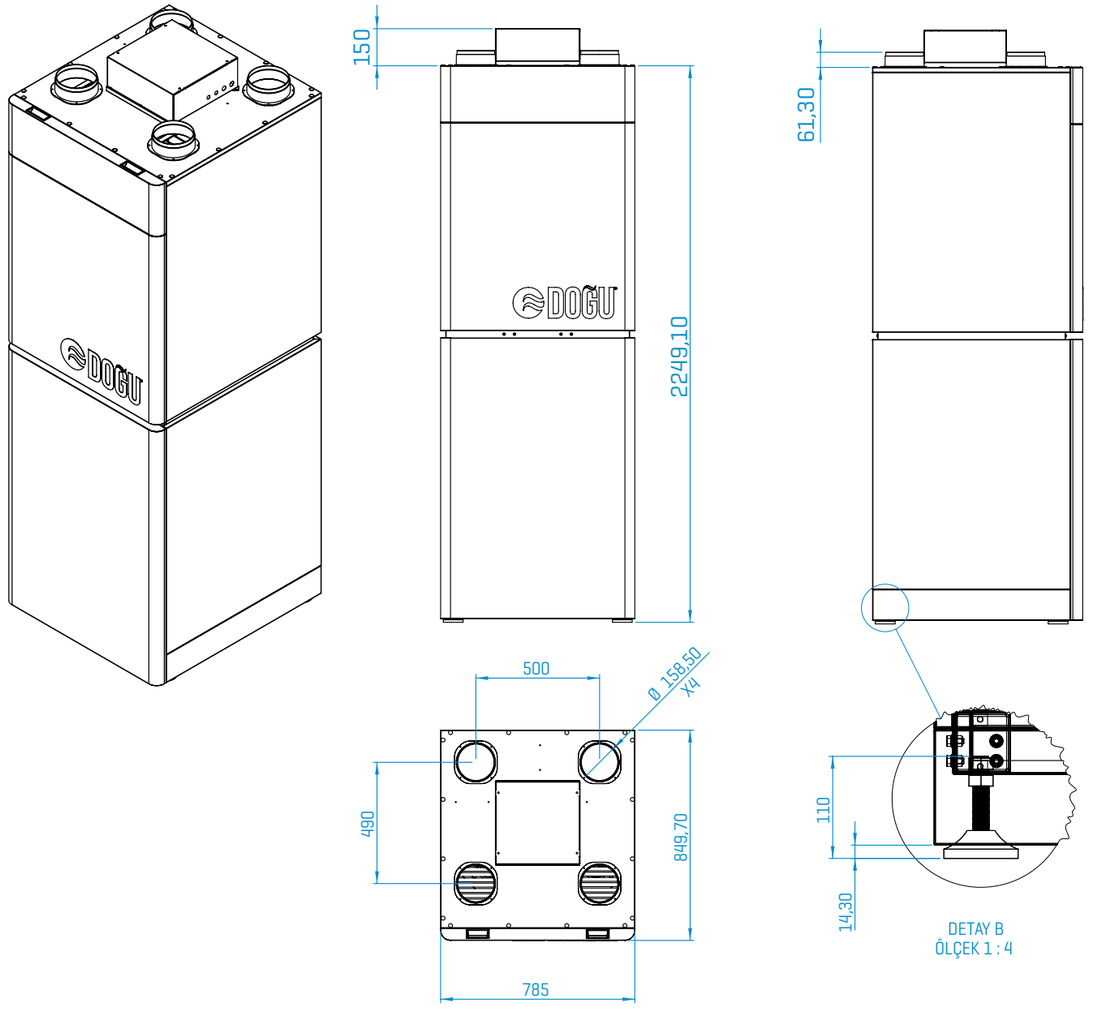
OPERATING PRINCIPLE

HOME-HW device has an operating principle based on hot water demand within the summer and winter scenarios.The controlled heat pump heats or cools the supply air according to demand.



DIMENSIONS



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TECHNICAL DATA

AirFlow	m3/h	350
External Static Pressure	Pa	200
Cooling Capacity(heat pump)*	kW	1.58
Heating Capacity (heat pump)*	kW	2
Refrigerant		R290 (PROPAN)
Refrigerant Volume	g	500
Heat Exchanger Efficiency	%	75
Tank Volume	l	200
Tank Heating Capacity with Heat Pump*	kW	2
Hot Water Temperature with Heat Pump	C	50
Tank Heating Capacity with Electric Heater*	kW	1.5
Hot Water Temperature with Electric Heater	C	60
Power Consumption (without electric heater)	kW	2.16
Electrical Connection		230V ~ 1/50 Hz
Duct Connections	dB(A)	40
Kanal Bağlantıları	mm	160
Weight	kg	150

AUTOMATION OPTION

- Touch screen option.
- Temperature can be monitored on the screen.
- Control feature via the app.

PRODUCED in DOGU

We produce energy efficient, environmentally friendly, innovative and sustainable air conditioning devices with the technology of the future.

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SUSTAINABILITY SOLUTIONS AT DOGU HVAC

GOOD HEALTH and WELL- BEING

We offer supplementary health insurance to our employees to promote healthy living. We also plan health-focused initiatives such as smoking cessation programs.

AFFORDABLE and CLEAN ENERGY

Our R&D center's 2,500 m² solar panels and 0.6 MW annual capacity solar energy systems reduce our carbon footprint. We generate our electricity, ensuring a reliable, sustainable, and accessible clean energy source.

RESPONSIBLE CONSUMPTION and PRODUCTION

We minimize waste through lean production policies and emphasize recycling, simultaneously increasing efficiency in our production processes.

QUALITY EDUCATION

Through the DOGU HVAC CLUB project, we organize technical tours of our factory, participate in career events, and provide sponsorships to support the skill development of university and technical high school students.

DECENT WORK and ECONOMIC GROWTH

Decent Work and Economic Growth: As an employer brand, our primary goal is to protect our employees' rights and create a workplace founded on equality and justice for all employees.

CLIMATE ACTION

We support environmental protection through our eco-friendly, sustainable, energy-efficient product lines and R&D efforts focused on reducing waste that could contribute to climate change.

GENDER EQUALITY

In 2024, we increased female employment in our administrative and production departments. This step aims to contribute to gender equality by offering a workplace with equal rights for all employees.

SUSTAINABLE CITIES and COMMUNITIES

We enhance indoor air quality with environmentally friendly and energy-efficient products, ensuring adherence to European standards.

PEACE, JUSTIGE and STRONG INSTITIONS

We value transparency and accountability, working with associations like ISKAV to prevent corruption and unfair competition, aligning with sectoral ethical values.

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Venues Breathe With Us

Read to watch our
promotional video

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