





THE FEATURES OF THE ECO SILVER HOUSE APARTMENT BUILDING:

1. General information:

1.1	location	Ljubljana, Slovenija
1.2	square meter of land	3.717 m ²
1.3	walled up area	1.568 m ²
1.4	the net / gross floor area of the entire building	23.455,89 m ² / 26.795,99 m ²
1.5	net / gross floor area	9.976,00 m ² / 12.992,11 m ²
1.6	net / gross heated area	12.268 m ² / 14.260,00 m ²
1.7	total number of floors:	17
	parking basements	4
	ground floor with gates and business premises	1
	mezzanine with storerooms	1
	residential floors	9+2
	floors with duplex apartments	2
1.8	number of residential units	128
1.9	 number of parking spaces in the basement garage	279
1.10	 green roof	750 m ²
1.11	 solar plant: power / annual production	33 kW / 34,3 kWh
1.12	 reservoir for rainwater: m ³ / water savings	60 m ³ / cca 500 m ³
1.13	 energy consumption for heating	8 kWh/m ² a (EI) 14 kWh/m ² a (PHPP 2014)

TECHNICAL DETAILS OF THE ECO SILVER HOUSE:

2. Healthy environment and high indoor comfort:

2.1	air quality / continuous change of air:	CO ₂ , ozone, odors, within the normale range 24ur /day, every day of the year. Changing the air at least 30m ³ /person/hour
2.2	ideal teperature in the room/ considering current outside temperature:	20 – 26°C
2.3	moisture in the air:	up to 60%
2.4	insects, particulates (dust, pollen, etc):	filtered air intake, filters G4 (F6 optional) Brink Renovent HR
2.5	noise / windows closed:	≤ 24dB
2.6	user-friendly application for apartments / IKC:	automatic operation devices

high living comfort with low energy consumption

fresh and healthy air

ICC system for the control of all devices

peaceful place

LIVING
COMFORT

ECO SILVER HOUSE

biometrics + ICC touch control + remote controller

- healthy living conditions:
automatic air quality regulation:
fresh air, temperature, humidity, etc.
- low energy consumption
and diminished CO₂ emissions
- automatic ICC control system
for all devices
- silence

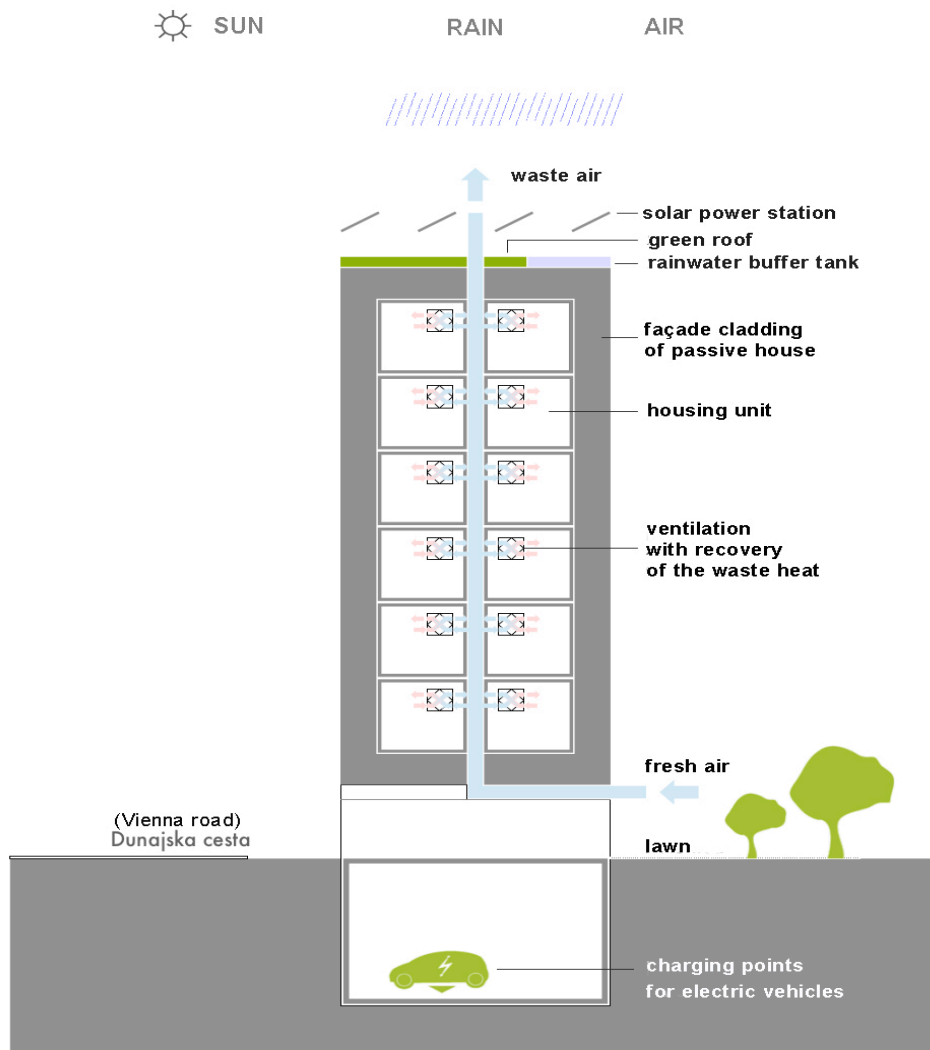
EXISTING HOUSES

keys + classical switches

- unhealthy living conditions:
bad air, humidity, dust, etc.
- high energy consumption
and high CO₂ emissions
- unclear control
- noise

3. High insulated building envelope

	Implementation of the envelope by passive standard on PHI principles, RAL windows installation, ventilated airtight apartments	U value - W/m ² K
3.1	walls p1	0,18/ implementation 0,16
3.2	roof e3	0,11/ implementation 0,11
3.3	Roof, terraces e1	0,16/ implementation 0,17
3.4	floor towards mezanine	0,18/ implementation 0,16
3.5	windows and doors/ PVC frame and triple glass	U _g =0,6 and 0,5; U _w ≤0,9W/m ² K



4. Technique in the apartments:

	Systems and equipments in the apartments related to the ICC (Intelligent control centre)	Integrated systems for automatic mode to ensure the comfort and pleasantness in the apartments
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4.1 HEATING

	source: district heating	STP – residential heating station/ ICC
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living rooms	Radiator or convector heating / steering valves / temperature sensor in the living room / ICC
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Sleeping rooms and other spaces	Radiator heating / thermostats
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4.2 HOT WATER HEATING

	source: district heating / STP - residential heating station / consequant preparation without hot water reservoir	STP - residential heating station / 30% energy savings for DHW heating
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4.3 VENTILATION SYSTEM

	Ventilation device with heat recovery in the ventilation system – heat recovery exhaust air	Brink Renovent
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Constant exchange of air in the apartments	min 30m ³ /h person / 100 – 400m ³ /h on apartments
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Heat recovery unit's efficiency	≥85% po PHI
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controlling of ventilation	control the amount of air through the ICC / air quality sensor in the living room
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4.4 CHILLING

	Air duct integrated into the ventilation system	cooling and dehumidifying the air in all rooms / ICC
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controlling of cooling and dehumidifying	humidity sensor in the living room and data from the weather station / ICC
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4.5 COOLING



Pre connectors of installations for split air conditioning mounted split air conditioner in the large apartments and studios, in other apartments it is installed on request.

4.6 EXTERNAL BLINDS



automated external blinds / solar gains in winter and shading in the summer automatic operation depending on the solar radiation and seasons of the year / managed by ICC

controlling of the shades Automatically and manually through ICC

4.7 LIGHTS CONTROL



living rooms / other rooms as an option lights control via ICC

hall sensor lamp

4.8 SOCKET CONTROL



selected socket in the apartment socket on/off via ICC

Devices control from a distance/ICC

4.9 IP VIDEO INTERCOM



vehicles access to the garage Remote control for residents, visitors video intercom /ICC

entrances / foot access Video intercom / ICC

4.10 BIOMETRICS DOOR OPENERS



the main accesses into the building and inside the building biometrics readers in the system and the key

apartment's front door independent biometric reader and the key

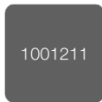
4.11 CHARGING POINTS FOR ELECTRIC VEHICLES



Charging points for electric vehicles

charging points in the garage (Avant car)

4.12 SMART COUNTERS



Common electricity use, rain water savings, energy obtained from solar power plant

Data control of the common energy and water use and savings

/ display data on ICC

4.13 RAINWATER HARVESTING/



Rainwater collecting system on the roof for flush toilet's tanks

water current data and water consumption savings / display data on ICC

4.14 ALARM / technical security



residential units - apartments

independent alarm in each apartment / connected to ICC

Entrances, common areas and garage

Total video surveillance

4.15 WEATHER STATION



Measuring current weather data/ on the roof

temperature, pressure, humidity, wind, solar radiation / displayed on ICC

Using of measured weather data on ICC

Implemented scenario for the ICC

4.16 ICC CONTROL / Intelligent Control



Center for systems management:

automatic control of all devices and systems in the apartments /

scenarios: auto, indoor, out, EKO, custom settings...

Control devices and systems in the apartment:

- HVAC (heating, ventilation and cooling)
- shades control
- lights and sockets control
- video intercom and access control
- weather station
- consumption control
- remote control

ICC touch screen

and smart phone remote /or controlling through:
TV, computer, tablet, / as options



4.17 DIGITAL TELECOMMUNICATIONS /



fiber optic connection to apartments

choice between three different telecommunication providers

IP TELEVISION

IP TELEPHONY

CELLULAR TELEPHONY / as an provider option

INTERNET
