

Technical Overview

ENGINEERED FOR PERFORMANCE — DESIGNED FOR COMFORT

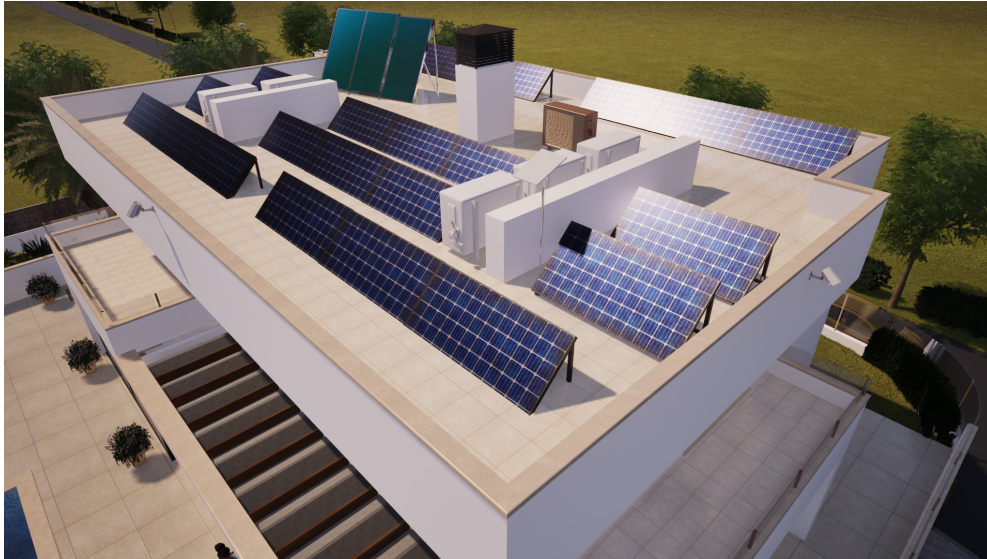


Villa Navio is developed with a strong focus on performance, sustainability and long-term comfort.

Every technical element has been carefully selected to ensure efficiency, durability and a premium living experience.

Key Technical Highlights

Designed to deliver efficiency, comfort and long-term performance.



- **Underfloor heating throughout the entire villa**
- **Panasonic T-CAP heat pump system for consistent performance**
- **Solar photovoltaic panels for energy efficiency**
- **Solar thermal system for domestic hot water**
- **Engineered for optimal thermal performance for climate control**
- **Pre-installation for pool heating system**
- **Advanced ventilation and air renewal system**
- **Energy-efficient systems designed for long-term sustainability**

Climate & Comfort Engineering

A fully integrated climate system ensures optimal comfort throughout the year, combining energy-efficient underfloor

Climate System Overview

Water-based underfloor heating system throughout living areas and bathrooms

Integrated cooling via fan-coil or air distribution system (where applicable)

Independent climate zones for optimal temperature control per area

Heat pump driven system for maximum efficiency

Comfort & Indoor Environment

Balanced indoor temperatures in all seasons

Natural ventilation in bathrooms and service areas

Optimized air circulation in living and sleeping areas

Low-noise operation for enhanced living comfort

Cooling system via Airco's in living room, kitchen and all bedrooms

Energy Efficiency

High-efficiency heat pump system (Panasonic T-CAP or equivalent)

Low energy consumption due to radiant floor systems

Compatible with renewable energy sources (solar integration)

Designed to achieve high energy performance standards

Smart Control (Optional)

Centralized thermostat control system

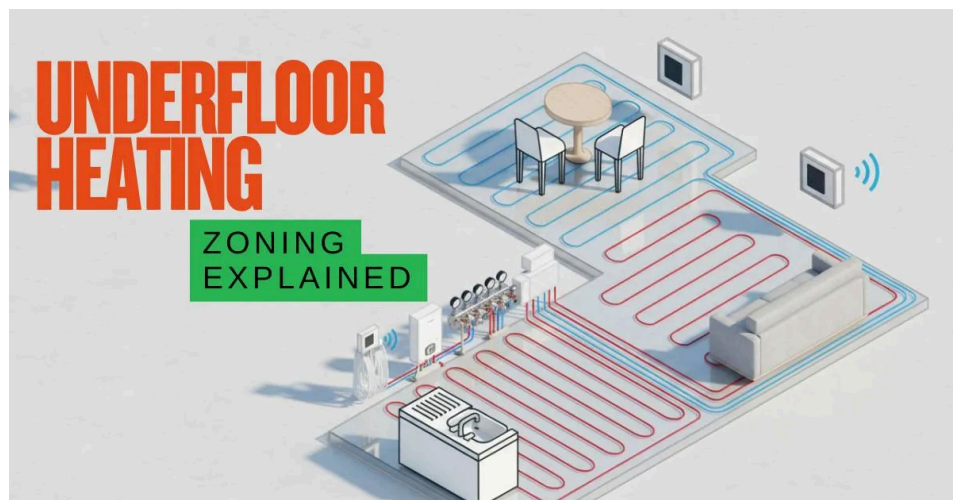
Individual room temperature settings

Remote control capability

(smart home ready)

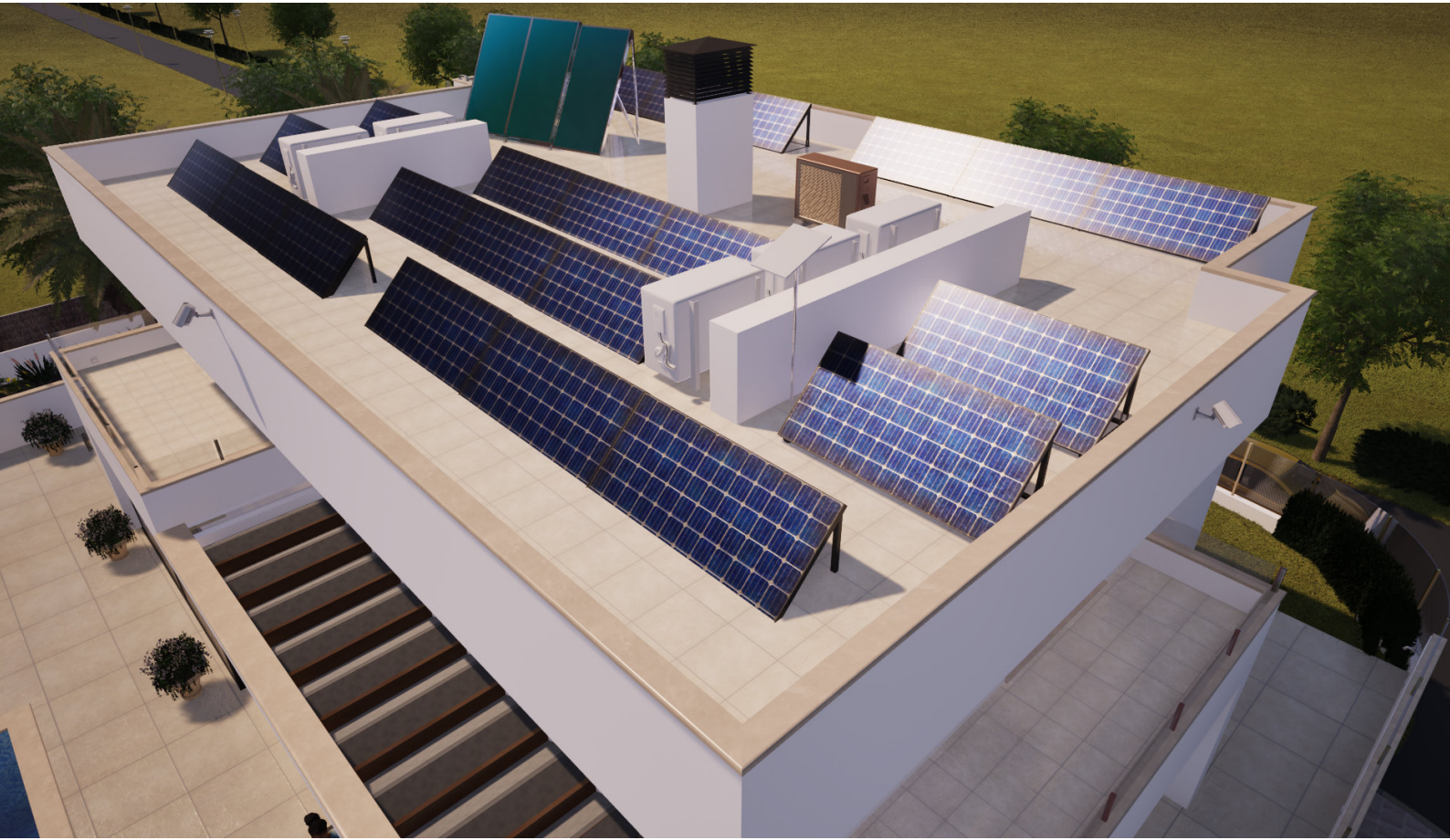
Glazing & Openings

Large sliding glass elements seamlessly connect indoor and outdoor living while maintaining high thermal and acoustic performance.



The system is designed to provide a seamless balance between comfort, efficiency and sustainability, ensuring a refined indoor climate throughout the year.

Energy & Sustainability



Designed for efficiency and independence, the villa integrates advanced photovoltaic technology, reducing energy consumption while maintaining maximum comfort.

22 x Ledvance 475WP – BIF Mono FPblack 475 Photovoltaic Panels 1954x1150mm
Solar collectors PFM-S 2.5 Vertical

Heatpump Installation Panasonic Aquarea T-CAP 12 kW

Energy label Class A+++

Self-consumption system - [3.0.2 - Batteries Kit – Storage 11040W](#)

Smart energy management system

Starlink system with Multiroom WiFi Network

Smart TV's in Livingroom and Bedrooms

Powered by a high-performance Panasonic Aquarea T-CAP
12 kW heat pump, delivering year-round climate control
with exceptional efficiency.

The system maintains full heating capacity even at extreme
outdoor temperatures, ensuring consistent comfort without
reliance on auxiliary heating.



Swimming Pool Installation

Pre-installed for Pool Heating

Pool Construction & Structure

- Reinforced concrete swimming pool structure
- Waterproofing system with high-performance membrane
- Interior finish (tiles or liner, depending on specification)
- Overflow or skimmer system (project dependent)

Filtration & Water Treatment

- Complete filtration system including:
 - Sand or glass media filter
 - Circulation pump
 - Multiport valve
- Integrated piping and circulation network

Pool Equipment & Accessories

- Surface skimmers or overflow channel
- Bottom drains and return inlets
- Pool lighting (LED underwater lighting)
- Technical plant room with all equipment installed

Hydraulic Installation

- Complete hydraulic piping system (pressure-tested)
- Valves and control systems
- Water supply and drainage connections

Electrical Installation

- Electrical connection for pool equipment
- Control panel for pump and filtration system
- Lighting control system

Pre-installation for Pool Heating

- Dedicated hydraulic connections for future heating system
- Space reserved in technical room for heat pump or heating unit
- Electrical provision for connection of pool heating system
- Pipework prepared for integration of heat exchanger or heat pump

Optional (if applicable)

- Automatic pool cover (pre-installation or included)
- Heat pump for pool heating (optional upgrade)
- Smart control system for remote operation



Pool Basement / Extra Storage

Underneath the Entrance Stair is the access to the pool basement and extra storage



The pool is delivered fully operational, with all technical systems installed and prepared for the seamless integration of a future heating system.

Smart Home & Energy Management

Villa Navio is designed with an integrated smart home infrastructure that enhances comfort, efficiency, and operational control.

The property includes provisions for intelligent management of lighting, climate systems, and energy usage, all of which can be controlled locally or remotely via smart devices.

The system is prepared for integration with renewable energy solutions, enabling optimized performance and reduced operational costs.

Automated climate control ensures consistent indoor conditions while maintaining energy efficiency.

In addition, the infrastructure includes pre-installation for advanced security and monitoring systems, allowing future integration without structural modifications.

System Preparation & Capabilities

Pre-installation for home automation system

Multi-zone climate control integration

Smart lighting circuits (zoned control ready)

Energy management system preparation

Solar energy (PV) integration ready

Remote access via mobile devices

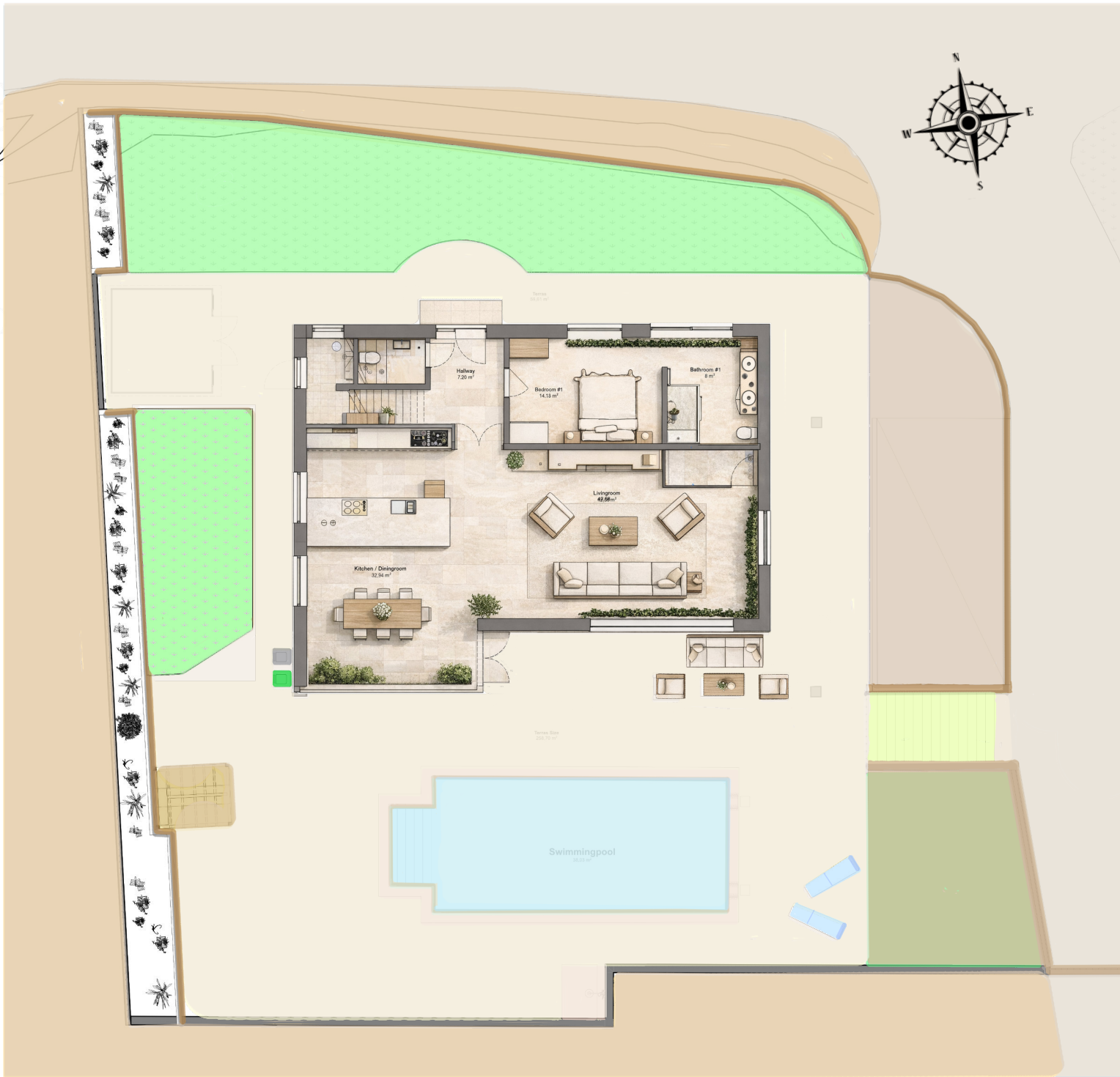
Security & surveillance pre-installation

Data and network infrastructure throughout

System Compatibility

Prepared for integration with high-end home automation systems such as KNX or equivalent platforms.

Ground Floor Plan



GROUND FLOOR DETAILS

Living Room	42,58 m ²
Kitchen/Dining	32,94 m ²
Bedroom	14,18 m ²
Bathroom	8,00 m ²
Hallway	7,20 m ²
Toilet	2,08 m ²
Total Internal Area	118,25 m²

OUTDOOR AREAS

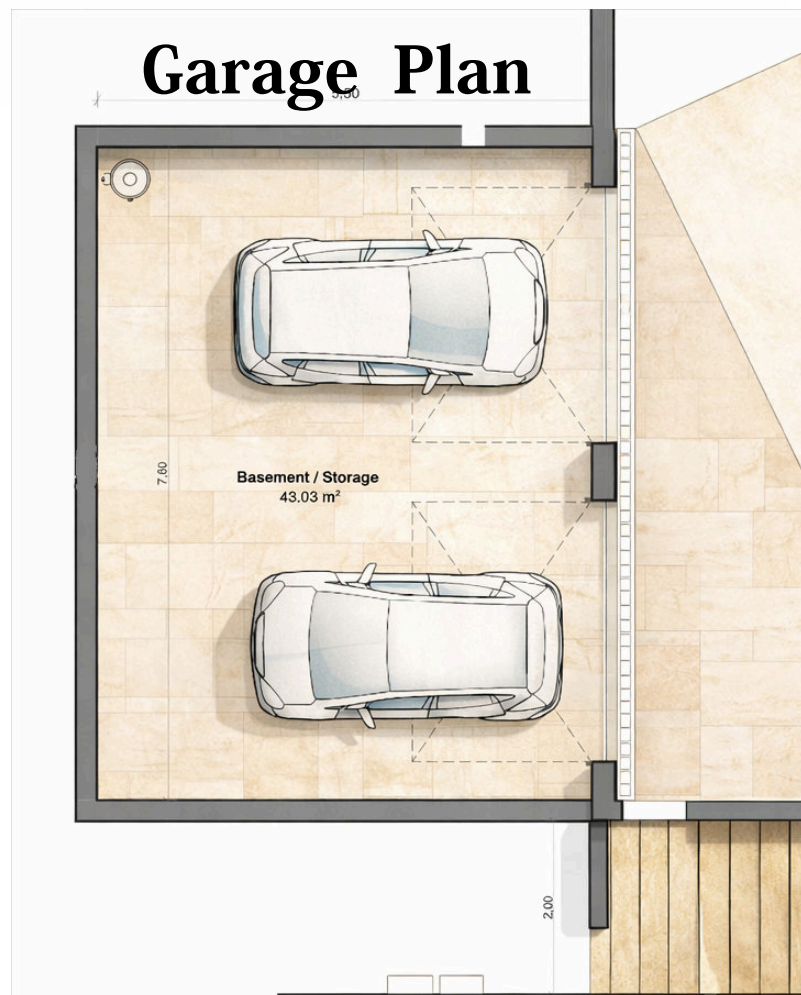
Terrace	59,61 m ²
Total Outdoor	258,70 m²
Swimming Pool	38,03 m ²

First Floor Plan



FIRST FLOOR DETAILS

Hallway	4,58 m ²
Bedroom 2	21,31 m ²
Bathroom 2	14,86 m ²
Balcony 1	17,48 m ²
Walk-in Closet	6,56 m
Bedroom 3	33,36 m ²
Bathroom 3	12,68 m ²
Balcony 2	8,19 m ²



The Kitchen

The heart of the Villa

Designed as the central living space, the kitchen combines refined materials, integrated technology and a functional layout for both everyday living and entertaining.



Kitchen Specifications

- Custom-built kitchen cabinetry
- Integrated Bosch premium appliance line
- Stone worktop (quartz / ceramic finish)
- Kitchen island with double sink
- Soft-close drawers and cabinets
- Integrated LED lighting
- Integrated Double 220V Connection Posts
- Flush wall integration for a seamless look

Appliances & Equipment

- Built-in oven – Bosch
- Microwave – Bosch
- Induction hob – Bosch
- Integrated fridge & freezer – Bosch
- Dishwasher – Bosch
- Wine cooler – Bosch
- Coffee machine – DeLonghi
- Hot water tap with integrated boiler
- Washer & dryer – Bosch

Key Features

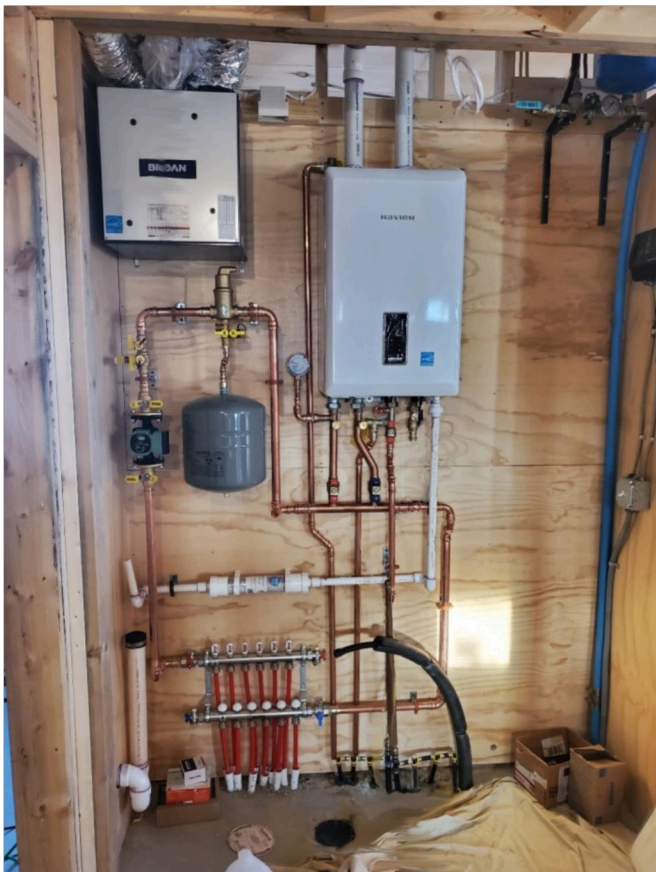
- Open-plan connection to living and dining area
- Direct access to terrace
- Designed for entertaining and daily comfort

Construction & Build Quality

Built to the highest standards of modern construction, combining structural integrity, advanced materials and refined finishing.

Construction Quality

- Reinforced concrete structural system
- High-performance thermal insulation (walls and roof)
- Double-glazed aluminium window systems
- Advanced waterproofing and moisture protection
- Acoustic insulation between living spaces
- Flat roof construction with insulation layers
- Structural design compliant with modern EU standards



Technical Systems

- Air-to-water heat pump system (high efficiency)
- Integrated underfloor heating and cooling
- Central hot water system (500L boiler)
- Mechanical ventilation in wet areas
- Electrical installation prepared for smart home systems
- LED lighting throughout the property
- Pre-installation for EV charging station

Exterior & Finishes

- Exterior walls finished with high-quality render
- Natural stone / ceramic outdoor flooring
- Landscaped garden with irrigation system
- Private swimming pool with filtration system
- Outdoor lighting integrated in design
- Driveway and access areas finished in premium materials

Technical Specifications

◆ 1. STRUCTURE & BUILD

- Reinforced concrete structure
 - High-performance thermal insulation
 - Flat roof construction with waterproofing system
 - Exterior walls with high thermal resistance
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◆ 2. CLIMATE & HEATING

- Underfloor heating throughout the villa
 - Panasonic T-CAP heat pump system 12 kW
 - Integrated domestic hot water system
 - Energy-efficient climate control system
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◆ 3. GLAZING & OPENINGS

- High-performance double or triple glazing
 - Thermally broken aluminium window frames
 - Large sliding glass doors for indoor-outdoor living
 - Optimised thermal and acoustic insulation
 - Solar control glazing
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◆ 4. ENERGY & SUSTAINABILITY

- Solar photovoltaic panels
 - Solar thermal system for hot water
 - Energy-efficient installations throughout
 - Prepared for high energy rating
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◆ 5. VENTILATION & AIR QUALITY

- Mechanical ventilation system
 - Continuous air renewal system
 - Optimised indoor air quality
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◆ 6. WATER & POOL SYSTEMS

- Swimming pool with technical installation
 - Pre-installation for pool heating system
 - Efficient water circulation system
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◆ 7. ELECTRICAL & SMART FEATURES

- Modern electrical installation
- LED lighting systems
- Pre-installation for smart home solutions
- Starlink High-speed internet connectivity in all rooms