

# **TECHNICAL SPECIFICATIONS**

## **CUBE RESIDENCE - GENERAL**

### **1. THERMAL INSULATION AND ENERGY PERFORMANCE:**

The building envelope will be thermally insulated according to the Cyprus Energy Department law. Each apartment will come with an Energy Performance Certificate.

The Energy Performance Certificate gives information about the energy efficiency and carbon dioxide emissions of a home.

The rating measures the energy and carbon emission efficiency of a house or flat using a grade from 'A' to 'G'. An 'A' rating is the most efficient, while 'G' is the least efficient.

The average efficiency grade to date is 'D'. To qualify for grade "A" you must produce renewable energy.

**CUBE RESIDENCE** apartments are rated grade "B".

### **2. LOADING BEARING FRAME:**

Reinforce concrete structure.

### **3. GUTTERS AND DOWNSPOUTS:**

The Rainwater from the roof and the balconies through gutter drains and in PVC pipes 63mm on Diameter will end up to small manholes and from there to the rain water system.

### **4. WATER PROOFING:**

#### **a. POLYETHYLENE PLASTIC SHEETING**

A layer of polyethylene plastic sheeting is installed under the surface of the flooring all over the interior and exterior of the house, as a prior to the application of the screed.

#### **b. DERBIGUM**

Derbigum 4mm and bronze paint will be applied to all horizontal surfaces of the uncovered roofs. In addition to the above, all verandas and balconies, which are in risk to cost leaking, will be protected by 4mm derbigum over the screed surface before flooring.

## 5. STRUCTURAL FRAME:

Anti-seismic structural frame made of reinforced concrete category C25 and C30, under the study and supervision of a civil engineer.

## 6. WALLS:

**External walls** are made of thermal brick 25cm, with thermal conductivity  $\lambda=0.177$  [W/m.k]

**Internal Walls** are made of normal brick 10cm and 20 cm.

## 7. PLASTIC MESH:

Special plastic mesh is applied in order to control settlements and Cracks, at all the joints of concrete and brick-work.

## 8. PLASTERING:

3 coats of plaster and emulsion paint for the interior and 2 coats of plaster and paint for the exterior. Columns and beams the will have thermal plaster with a conductivity  $\lambda=0.051$  [W/m.k]

## 9. ROOF:

Will be thermally insulated with 50mm polystyrene of thermal conductivity  $\lambda=0.177$  [W/m.k], screed C20 and a waterproof membrane on top.

## 10. ELECTRICAL SERVICES:

### 10.a. COMMON LIGHTING

The external lighting of the complex has been designed to give the proper illumination with the maximum possible energy saving.

The private road will be illuminated with modern poles. These poles will be switched on with a photo cell and switched off by a timer after the set time. Until the morning motion detectors will activate the poles on the perimeter of the pathway and after passing through the lights will turn off automatically with a time delay.

The parking area lights will be switched "ON" via motion detectors with the ability to extend the time "ON" via local push buttons switches when it is required so.

The swimming pool and playground area will be illuminated with modern led lights (small poles & up lights). These lights will be switched on with a photo cell and switched off by a timer after the set time. Only the swimming pool area will be constantly illuminated until the morning for safety reasons and it will be switched off by a photocell.

The garden areas will be illuminated with spike led lighting giving emphasis to the trees and plants.

At the stairs of blocks A & B the lobby lights of each floor are automatically activated. Also in those two areas there is enough emergency lighting and illuminated exit signs in case of emergency buildings evacuation.

At rooftop there is a typical lighting serving that area only for maintenance purpose.

#### **10.b. DOOR VIDEOPHONE AND ACCESS SYSTEM**

There is a video entry/access phone system comprising an indoor monitor in each apartment, a camera unit with night visibility, and an electric main entrance remote opener. Visitors can make a video call from the main entrance for owners to allow access.

#### **10.c. FRONT AREA CLOSED CIRCUIT TV MONITORING**

The front area of the building and the ground floor lobby are covered by day/night high resolution cameras to discourage intruders.

#### **10.d. CENTRALISED MULTIPLE ACCESS TV SYSTEM**

Consisted by one terrestrial antenna for the local terrestrial digital channels and one satellite dish (ability to connect more satellite dishes in future) on "HOTBIRD 13" for the satellite channels and a multiswitch in order to combine, amplitude & split the Radio Frequency signal in quality to any apartment for every complex.

#### **10.e. ELECTRIC GATES**

There are two electric swing door gate openers one for exiting and one for entering the complex area activated via radio frequency remote controls allowing only to the owners, to entering/leaving the buildings.

#### **10.f. LIFT**

Machine room less, hi tech lift with 1m/s velocity and passengers disengage system in case of power fail.

#### **10.g. INTERNAL LIGHTING**

The lighting of each flat has been design to provide ease of use with conventional lighting control (no automation).

The lighting points have been selected carefully to satisfy as much as possible and have been separated into sub circuits in order to provide separation (a fault to a luminary will trip only the respective circuit, not all the lighting of the apartment).

#### **10.i. FLAT SMALL POWER**

Small power distribution system is consisted from a plenty, (carefully designed according to the needs of each area) number of the conventional 13A BS1363 switched socket outlets and the separate supplies to any fixed installed appliance such as air conditioning units, electric cooker, electronic oven, dish washer, tumbler dryer, washing machine e.t.c.

#### **10.g. TELEPHONE & STRUCTURE CABLING SYSTEM**

Ethernet network using CAT6 cable, allowing access to the Internet. (Router is not provided). The same cable is used for telephone service. Sockets are distributed around the apartment in appropriate locations and can be used for both data and voice.

#### **10.k. WIRELESS INTRUDER ALARM (SECURITY SYSTEM)**

Only provision for power supply to main intruder alarm panel and one number structured cabling point for voice and/or data for communication.

### **11. WINDOW SILLS:**

Window sills are marble made.

## 12. OPENINGS:

All openings will be made from thermal aluminum with double glazing. The exterior glass will have a low-e coating (Energy N) with U value of 1.4 [W/m<sup>2</sup>.k].

## 13. CENTRAL HEATING & AIR CONDITIONING:

### **PROVISIONS FOR CENTRAL HEATING WITH ELECTRIC RADIATORS.**

Provisions for Electric Radiators. Each room will have the provision for a separate independent radiator with a wireless control and thermostat.

### **PROVISIONS FOR AIR CONDITIONING SYSTEM**

Provisions for Mini VRV with wall type indoor units one for each bedroom and 2 for the living room. The bedrooms will have provision for a cooling capacity wall type unit of 9000 btu/hr and the living room units will have provision for a cooling capacity wall type unit of 18000 btu/hr each.

The Outdoor unit provisional place will be on the roof.

## 14. PLUMPING SYSTEM

**Piping:** The central pipes from the mains until the solar system and from there to the manifolds in the flats will be made from low expansion polypropylene. The manifolds will be bronze made. After the manifolds there will be Pex Pipes (pipe in pipe system).

The solar System consists:

**Hot water cylinder:** 200 liter high pressure copper cylinder, thermally insulated, and with stainless steel finish fitted with a 3kw secondary electric heater.

**Cold Water tank** made from Polyethylene with UV protection, suitable for drinking water.

**Solar Panel** made of an aluminum frame, fully thermally insulated at the back and on the sides, 4mm special glass face and copper interior.

**Pressure unit** suitable for 3 bar pressure for cold and hot water.

**15. PLOT FENCES:**

The boundaries fence are made of the fair face concrete and finished with grafiato or paint.

**16. SEWERAGE CONNECTION:**

According to the Sewerage board of Limassol.

**17. FLOORING:**

The entrance hall, living & dining areas and kitchen are finished with best quality marble or ceramic tiles of purchase price EURO€34/m2.

The bathrooms are paved with the best quality ceramic tiles of purchase price EURO€34/m2, as well as verandas with the ceramic tiles of purchase price EURO€25/m2. Bedrooms have laminate parquet flooring of purchase price EURO€25/m2.

**18. WALLS TILES:**

For kitchen: best quality ceramic tiles of purchase price EURO €34/m2.

For bathrooms: best quality ceramic tiles of purchase price EURO €30/m2.

**19. SANITARY WARE / FITTINGS:**

Top quality sanitary ware is installed, and completed with matching accessories for the purchase price (p.p) of EURO €4000 in total.

**20. CARPENTRY:**

Entrance door, kitchen cupboards, wardrobe units, internal doors, are all imported from quality manufacturers in Italy:

- Entrance door is p.p EURO€1350/No.
- Kitchen cupboards are p.p EURO€400/m.
- Wardrobe units are p.p EURO€380/m2
- Internal doors are p.p EURO€450/No.
- All handles are p.p EURO€600 in total.

## **21. METAL INSTALLATION:**

The stairs railing is made of steel.

The balcony railings are made according to the drawings.

Top of the perimeter fence is a designed steel railing made according to the drawings.

## **22. FACILITIES:**

**COMMON SWIMMING POOL** - 92sq.m. common swimming pool with fountains and pool deck inside the pool.

**PERGOLAS** - A wooden pergola for shading purposes outside the pool.

**SAUNA** - Outdoor sauna next to the pool area for the use of all habitants.

**GATED ENTRANCE** - Gated entrance leading to the project

**PATHWAY ACCESS TO THE BEACH** - 120 meters pathway leading to the beach.

**PLAYGROUND AREA / GREEN AREAS** - 2530sq.m. of green area, playground area equipped with the latest outdoor toys.

## **23. CLEANING:**

After the completion of all the works, the property must be cleaned and delivered to the owner.

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