



**Descriptive specifications of the works**



MEDITERRANEUM  
S A R D I N I A N S E A

## **GENERAL INFORMATION**

1. GENERAL DESCRIPTION OF THE PROJECT
2. THE DESIGN ACCORDING TO SEISMIC CRITERIA
3. DESIGNED FOR A HIGH ENERGY EFFICIENCY CLASS
4. THE LIVING COMFORT
5. THE SOUND COMFORT



MEDITERRANEUM  
S A R D I N I A N S E A



## GENERAL INFORMATION

### 1. GENERAL DESCRIPTION OF THE PROJECT

The intervention aims at carrying out all the necessary works, according to the enclosed documentation, for the realization of residential buildings, located at Castelsardo (SS). The project mainly consists of the following activities:

- Realization of one building set out in two above-ground floors; on the ground floor the units will be supplemented with a garden and the upper floors with wide terraces.
- The outdoor arrangement includes the realization of stone-faced retaining walls; the gardens will be finished with mowing grass lawn and delimited by fences and hedges. As to the appurtenance, it will be possible to choose among private external parking spaces.

### 2. THE DESIGN ACCORDING TO SEISMIC CRITERIA

The project of the buildings has been made out in compliance with the current seismic regulations. With the coming into force of M.D. 14 January 2008, "Technical Regulations for Buildings", the estimate of seismic riskiness is defined by adopting an approach closely connected with the construction "site". The building-related check of seismic stress suitability is carried out to a "threshold state" extent, that is, under conditions in which the structure shows specific damage effects.





MEDITERRANEUM  
S A R D I N I A N S E A

### 3. DESIGN FOR A HIGH ENERGY EFFICIENCY CLASS

What is a high energy efficiency class?

Buildings are subdivided into seven classes, A, B, C, D, E, F, G, depending on their energy consumption features. The energy requirements of a G class building are higher than the equivalent of 16 l. of diesel oil/sqm per year; the requirements of a B class building are lower than the equivalent of 1,3 l. diesel oil/sqm per year. This implies a design that integrates plant-engineering and construction systems aimed, by using renewable energy sources, at ensuring top level living comfort combined with extreme energy efficiency. Living comfort implies, independently of the season, the atmospheric conditions and the quality of the outside air, living inside one's own environment in optimum temperature and humidity conditions constantly.

### 4. THE LIVING COMFORT

From a constructive viewpoint, living comfort is ensured by implementing solutions for the total insulation of the building envelope and the horizontal and vertical partitions between the various residential units, as well as between non-air-conditioned flats and areas, such as entrance halls, stairways, etc. In relation to the plant equipment within the different units; the living comfort is obtained by a climate control which ensures optimum heat exchange conditions, the minimization of the convective currents and the consequent motion of dust in the air.

### 5. THE SOUND COMFORT

The construction technology provides highly effective acoustic comfort, resulting from the accurate analysis of building envelope and system details: the boundary walls and the intermediate attics are equipped with special noise-abatement mats, while the water and sanitation facilities make only use of certified soundproof materials. The noise coming from the outside or from adjacent rooms is thereby attenuated, reaching sound insulation values exceeding the standards.





MEDITERRANEUM  
S A R D I N I A N S E A

## TABLE OF CONTENTS

1. DIGGING AND REFILL
2. LOOSE STONE FOUNDATION
3. FOUNDATIONS
4. BEARING STRUCTURES IN REINFORCED CONCRETE
5. VERTICAL BEARING STRUCTURES
6. HORIZONTAL BEARING STRUCTURES AND ROOFING
7. PERIMETER BEARING WALLS
8. BOARDS AND INTERNAL PARTITION WALLS
9. KITCHEN EXHAUST – CHANGE OF AIR
10. SANITARY SEWER DRAINS
11. FOUNDATIONS
12. WATERPROOFING
13. INSULATING MATERIALS
14. INTERNAL PLASTERS
15. EXTERNAL PLASTERS
16. NATURAL AND ARTIFICIAL STONE WORKS
17. FLOORING AND COVERING
18. EXTERNAL WINDOW / DOOR FRAMES AND INTER DOORS
19. PLUMBING, DRAINAGE AND SANITARY FITTINGS
20. HOT WATER DISTRIBUTION AND PRODUCTION SYSTEM
21. ELECTRICAL SYSTEM, ENTRYPHONE SYSTEM, PREARRANGEMENT OF VOLUMETRIC ALARM SYSTEM, SATELLITE TV SYSTEM
22. PAINTING AND VARNISHING
23. FENCING AND ARRANGEMENT OF GREEN PRIVATE AREA
24. PERIMETER PROPERTY FENCING
25. IRONWORKS, BARRIERS, BALCONIES AND VEHICLE/ PEDESTRIAN GATES
26. FIXTURES METER ROOM
27. AIR CONDITIONING SYSTEM
28. ANTIFALL GUARD
29. EXTERNAL LIGHTING
30. L-LL COMPARTMENT SWIMMING POOL AREA



MEDITERRANEUM  
S A R D I N I A N S E A



## 1. DIGGING AND REFILL

Ground and foundation digging is typically carried out by a suitable mechanical means and manually finished, in case; they will be pushed to the extent of the plan dimensions with a suitable cross-section according to the ground type and the property and safety requirements for the operators. Next to the property limits, special attention will be taken for the existing fences and minor construction jobs; it will be the contractor's care to restore any damage caused to other neighbouring properties, as well as restore any landslip that might occur. The foundation excavations will be:

- general works of excavation and removal of crop land;
- the obligatory section to reach the foundation bearing surface.

Against the perimeter walls of the building basement a suitable drainage will be provided, made up of PVC micro-perforated pipes for the collection and disposal of the seepage water, covered with pebbles or coarse gravel with an average width of 50 cm, covered with a woven/non-woven sheet and filled with materials from excavations or demolitions, if deemed suitable by the Works Management (suitable photographic documentation).

Such a canalization will be connected to the water mains through a suitably-sized inspection well downstream the building before being conveyed into the municipal sewerage system.

## 2. LOOSE STONE FOUNDATION

On the covered basement floor a suitably-ventilated loose stone foundation will be made, with vents canalized as far as the external flooring surface dimensions or according to the Works Management's directions.

## 3. FOUNDATIONS

The foundations will be plinth or ground beam type, continuous, insulated and sized according to the results of the structural plan. They will be laid in place by means of concrete formworks, suitably resistant and reinforced with FeB44K structural steel, according to the directions of the Works management related to reinforced Concrete.

Before laying the foundations, the relevant underpinning will be carried out with concrete blended at 150 Kg/mc cement R 32,5 per cubic metre of sand and gravel, (lean concrete) with a thickness of approximately 10 cm and projecting about 10 cm from the overhanging foundations.





MEDITERRANEUM  
S A R D I N I A N S E A



#### 4. BEARING STRUCTURES IN REINFORCED CONCRETE

The general planning and operation criteria of the reinforced concrete works must abide by the specific regulations in force and ensure the stability of the construction at all times. In particular the most relevant regulations are reminded:

- Law 5/11/71 no. 1086 "Regulations for reinforced, standard and pre-stressed concrete works and metal frame works";
- M.D. PUBLIC WORKS 16/01/96 "Technical regulations relating to the general criteria for the safety control of constructions and loads and overloads";
- PUBLIC WORKS Circular Letter "Directions for the enforcement of the "Technical regulations relating to the general criteria for the safety control of constructions and loads and overloads";
- NATIONAL RESEARCH COUNCIL 10012/85 "Directions for the evaluation of actions on constructions";
- UNI-regulations regarding the durability of concrete structures;
- New provisions as per Ordinance 3274 and relating to constructions in seismic zones.

All the structures shall be carried out in full respect of the structural plan of the construction and possible variations shall be approved by both the Works Management as for the structures and by the fulfiller company. The operating modes of concrete preparation and formwork construction shall be such as to ensure the stability of the structures according to the concrete casting exposure class. In particular:

- The net concrete covers will not be lower than 4 cm for the foundation structures and 2 cm for the other structures. The maintenance of the concrete covers will be ensured by the positioning of suitable plastic spacers;
- The concrete will be cast with a Resistance class (Rck) determined not only by the mere static needs but also by the need for compactness of hardened concrete.

In particular: under no circumstances will the water/cement ratio be higher than 0.6.

In order to ensure the necessary fluidity of concrete in the casting phase (which shall not be lower than a class 4 slump for walls and floors) suitable fluidizers or hyper-fluidizers will be used.

The content of concrete in the casting shall never be lower than 300 Kg/cm.

The structures will be constructed with suitable stiffness and strength to resist the side drifts.





MEDITERRANEUM  
S A R D I N I A N S E A

## 5. VERTICAL BEARING STRUCTURES

The bearing structures and more in general the concrete structures can be exposed or hidden inside the finishing elements.

In case of exposed structures the formwork system shall be carried out by means of suitable formworks, with the employment of bevels and drips on the corners and the weatherboards.

At the discretion of the Works Management, in case the above-mentioned defects were visible, it will be necessary to apply a cover of roughcast on the whole part concerned, without charging any additional expense. The primary elevation structure will be made of:

- Bearing structures in the basement along the ground perimeter of the rooms and where required by the structural plan. The construction of the walls will be made of reinforced concrete with the use of modular or similar panels in perfect working conditions, in order to ensure an optimum aesthetical performance. Alternatively, suitable slabs may be used, prefabricated and prefinished, with double face measuring 4+4+5 cm in thickness on each side, factory made, laid in place and filled with finishing cast;
- Bearing structures on the ground floor along the ground perimeter of the rooms towards the mountain and where required by the structural plan. The construction of the walls for skylight use will be made of reinforced concrete with the use of modular or similar panels in perfect working conditions, in order to ensure an optimum aesthetical performance;
- Frame of beams and pillars made of reinforced concrete and suitably braced. In the headers and the parts in direct contact with the external environment (for instance, the “edges” of the floor, parts of the pillars etc.) that cannot be stuffed the laying of mineralized wood fibre boards (“Eraclit” type) is planned, with a minimum thickness of 3 cm in order to eliminate heat bridges completely;
- The flights of stairs and the landings will be made of plasterable reinforced concrete;
- The balconies and the parapets are made of plasterable reinforced concrete, with the laying of suitable plastic drip where necessary.

## 6. HORIZONTAL BEARING STRUCTURES AND ROOFING

- The Basement covering floor will be a reinforced concrete and hollow tile mixed floor, laid in place or with prefabricated common joists and perforated blocks having minimum thickness of 20+4 cm (or, according to what envisaged in the structural calculations) with horizontal and vertical housings to eliminate thermal and acoustic bridges, complete of bracing and grout;
- The covering floor of the upper floors will be a reinforced concrete and hollow tile mixed floor, laid in place or with prefabricated common joists and perforated blocks having minimum thickness of 20+4 cm with horizontal and vertical housings to eliminate thermal and acoustic bridges, complete of bracing and grout;
- The building roofing will be made by inclined pitches with a wood structure, white coloured inside and light coloured outside the eaves), exposed and suitably sized, or alternatively made of reinforced concrete and hollow tiles; completed with the Ventilated Roof Covering System;
- The wood structure solution will consist of Lamellar Wood common joists, planed wood planking (white-coloured inside the unit and light walnut-coloured on the external eaves), DELTA PVE-type breathable Membrane, 6+6 cm thick cross-laid insulation layer, ventilation chamber consisting of a 5,00 cm thick plank, closing planking with 4 cm thick overlapping waterproof sheath layer. All the timber supplied for the making of the exposed roofing will be treated with a light-hued, anti-mould and anti-woodworm primer;
- The covering surface will be carried out in Rustic-type Cemen-tegola by Wierer, laid on a suitable support and complete with all accessories for antennae, vents and chimneys. The ridge shall be ventilated-type by laying PCV elements or breathable dry-laid fillet to enable the correct ventilation of the roofing.



MEDITERRANEUM  
S A R D I N I A N S E A

## 7. PERIMETER BEARING WALLS

The perimetric Bearing Walls will be made of ISO-TEX mould blocks characterized by high thermal-acoustic insulation (with tests carried out in place as provided for by the law on acoustics dated 05.12.1997) and made of wood-cement 500 kg/cm density dry-laid concrete, mismatched by half a block, to be cast every 5-6 courses, with vertical and horizontal interlocking joints, in order to completely eliminate the thermal bridges, and one single connection groove for concrete and vertical millings.

The range of blocks is completed by a series of special pieces, such as: half block, corner block, reveal block, floor stringcourse block, lintel block, pillar block. The partitions between the estate Units, where no bearing walls are planned, will be cavity walls, made up of: 12 cm hollow brick wall, rustic "long float" plastered on the internal side; double insulated 3+3 thick panel with possible vapour barrier and acoustic insulation, made up of a soundproof panel and internal closure with 12 cm thick planking.



## 8. BOARDS AND INTERNAL PARTITION WALLS

The internal partition planking is 8 cm thick in all rooms (10 cm when finished) excepting for the bathroom and laundry walls, where it will be 12 cm thick (15 cm thick when finished).

## 9. KITCHEN EXHAUST – CHANGE OF AIR

Each kitchen will be equipped with a 120 cm PCV UNI 302 pipe for the elimination of vapour from the gas cooking tops, to be conveyed beyond the main roofing dimension (roof).

The kitchen room aeration will occur through a wall through hole at 20 cm from the floor and 14 cm in diameter.

A fume exhaust connection rosette will be installed in each flat. In the rooms intended for Laundry and Bathroom use and in the blind storerooms a forced aeration device is provided by means of a Ø 120 cm pipe and related static extractor fan, suitable for changing and exhausting the air up to the main roofing (roof).





MEDITERRANEUM  
S A R D I N I A N S E A



## 10. SANITARY SEWER DRAINS

Vertical columns for waste water drain with GEBERIT-type circular-section rigid polyethylene pipes, welded in place and having suitable sections for the service loads and anyway not lower than 125 mm for the columns connected to WC and 80 mm for columns only connected to kitchen drains.

## 11. FOUNDATIONS

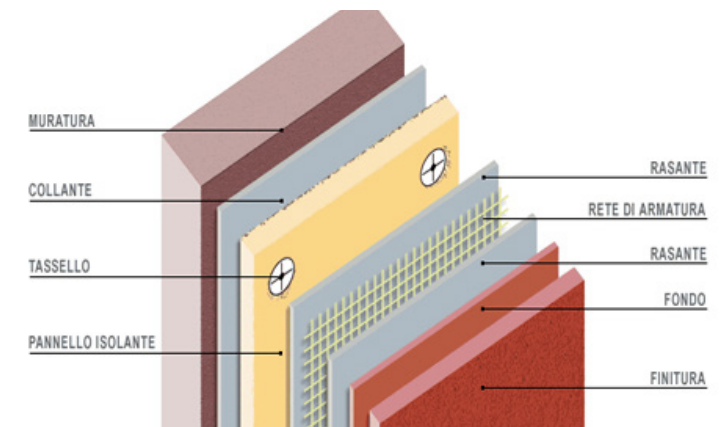
The floor bed of the living spaces will be made of a sand and cement layer mixed at 2,5 hundred kilograms per cubic metre and 4/5 cm thick, laid simultaneously with the floor (wet-on-wet).

As for the paving to glue, it will be necessary to prepare a suitably-mixed sand and concrete blinding, with a perfectly-levelled cement layer of 4 hundred kilogram. As regards the laying of lamparquet or prefinished parquet, any expense for possible smoothing of the blinding with specific products in order to increase adherence between floor and bed is understood as included.

## 12. WATERPROOFING

On the retaining walls of the building which delimit the air spaces and the cellar access rooms the laying of 2 sheets of a 4 mm thick bituminous plastomer sheath is provided, propped by fibreglass laid on face previously treated with primer and protected by a "fondalina-type" plate (high-density rustic polyethylene membrane) or "onduline-type" plates (corrugated sheet), freely applied on the external face to be laid below ground level, after cleaning the surface and heat sealed on the upper side. A minimum transversal 5 cm overlapping of the sheath sheets is expected, with heat sealing of the free side borders and extension of the bed sheath, so as to form a protection "apron" of about 10/15 cm below the upper level of the foundation plinth. The creation of fittings (cove edge/rounded edge pipes made of vibropressed concrete) between the vertical face and the foundation plinth is provided, in order to make the protection layers perfectly adhere and avoid any ripping. The waterproofing of the covering floors of the underground rooms, where the final settling as tilled land or pavement is planned, will be carried out in the following modes:

- creation of suitable gradients (minimum value 3 %) above the structural side, perfectly constructed in order to avoid any water stagnation areas;
- creation of all junctions on the edges in elevation or in plan, so as to make all protection layers perfectly adhere and avoid any ripping;





MEDITERRANEUM  
S A R D I N I A N S E A



- laying of double plastomer bituminous anti-root sheath, measuring 4mm in thickness, propped by fibreglass and cross-laid. The creation of expansion "necks" is arranged for surfaces above 40 sq m or where, due to constructive modes or functional needs, reciprocal shifting of the structure is foreseeable (for instance, expansion joints). Waterproofing comprehensive weight: 10-12 kg/sq m;
- laying of separation and sliding layer, 200 gr polyester fibre with 10 cm overlaps;
- creation of protection blinding, consisting of 3 cm thick concrete, dosed at 3 hundred kilogram/cubic metre cement;
- where tilled land is arranged, it will be necessary to lay a washed gravel drainage layer, 5 cm size, 10 cm minimum thickness, and to lay a superior woven/non-woven geotextile material for anti-root and separation purposes.

The balconies and the terraces will be sealed with a hot laid layer of bituminous plastomer sheathing with a thickness of 4 cm reinforced with glass fibre applied on the structural surface of the slab with an appropriate slope and creating a connection between the horizontal section and the vertical facing (« coving ») to perfectly adhere the protective layers and to avoid subsequent ripping. A return of the sheath will be carried out on the vertical walls for about 10/15 cm into a groove made in the vertical face (which will be obtained with the creation of the first external padding brick course measuring 8 cm in thickness instead of 12 cm).

### 13. INSULATING MATERIALS

The perimeter walls will be insulated by two panels of mineral Fibrate and an external vapour barrier ("Stifterite"-type), minimum density 120 kg/cm, 3 cm and 3 cm thick respectively, laid with staggered perfectly-sealed joints.

The partitions between the flats and the walls against the staircases will be insulated by two mineral Fibrate panels measuring 2 cm and 2 cm in thickness respectively, laid with staggered perfectly-sealed joints, according to the thermal and acoustic insulator.

The covering floors of the Basement floor and the Ground floor will be insulated acoustically by laying suitably-thick insulating layers compliant with the Current Regulations on acoustic insulation. After laying the system piping and an insulating layer of "Leca"-type or similar expanded clay, with minimum thickness of 6 cm an overhanging division block measuring 3 cm minimum in thickness will be applied.





MEDITERRANEUM  
S A R D I N I A N S E A

## 14. INTERNAL PLASTERS

- The walls and the ceilings of the air spaces / skylight well on the basement will be whitewashed, as they are made of reinforced fair-faced concrete;
- the walls (as regards any surfaces not otherwise faced) of the bathrooms and laundries will be finished with cement mortar render, and the horizontal and vertical surfaces will be perfectly formed. As high as their facing, the walls will be plastered with a simple bed of cement-lime mortar to receive the tiling;
- the walls and the ceilings of all lived room of the Basement floor, Ground floor and First floor (with the exclusion of the latter, if made of wood) will be finished with render;
- the walls and the ceilings of the common passageways, intended as entrance hall, will be finished with render.

## 15. EXTERNAL PLASTERS

The external walls will be rough finished and then plaster (or white coat) finished, in the shades provided for by the working plan and/or by the Municipal Technical Office.

## 16. NATURAL AND ARTIFICIAL STONE WORKS

The natural stone to use will be “Sardinian pink”, finished by choice (e.g. smooth – polished – “mezzapunta”), as necessary. As an indication, unless otherwise provided for by the Works management, the natural stone works will be:

- 5 cm thick window sills
- 7.2 5 cm thick door window thresholds
- 3/4 cm thick stairs facing, both for the riser and the tread
- 2 cm thick flooring of entrance halls, access rooms, stairs
- Monolithic pillars and/or columns on customer's drawing, with capitals and finishing at choice.





MEDITERRANEUM  
S A R D I N I A N S E A

## 17. FLOORING AND COVERING

The flooring of all house and residential room (including the whole Basement Floor) will be made of prime single-fired tiles, measuring 33 x 33 cm or 30 x 30 cm, laid diagonally with 4/ mm joint; while for the service rooms (bathroom and laundry, if arranged) a choice 20x20 cm tile flooring will be laid, plain coloured and diagonally laid with tile joints.

Sampling will include at least 5 types of ceramic tile floors. However the assignee is entitled to use materials differing from those sampled as per specifications.

The facing of all bathroom and laundry walls is planned at a height of 2,10 cm (depending on the tile model) and of the kitchen or kitchen corner fitted wall only, and of a 120 cm portion of an adjacent wall, if any, at a height of 1.60 m (depending on the tile model), using 20x20 plain-coloured no-decoration ceramic tiles.

Sampling will include at least 5 types of ceramic tiling. However the assignee is entitled to use materials differing from those sampled as per specifications.

N.B. The ceramic tiling decorations and strips are excluded from the above-quoted price and will fall under the possible variations.

The floors of the balconies will be made of choice antifreeze single-fired tiles, measuring 33 x 33 cm or 30 x 30 cm, laid diagonally with 4/5 mm joint.

The private pavements linking the single Estate Units will be made of antifreeze klinker, with skirting board of the same material. Sampling will include at least 2 types of flooring.





MEDITERRANEUM  
S A R D I N I A N S E A



## 18. EXTERNAL WINDOW / DOOR FRAMES AND INTERNAL DOORS

- Window and French window frames will be made of 68 mm solid wood, complete with brass supporting hardware, made up of 3 brass “ANUBA” hinges and “MAICO” cremone inverted closure with three closing points, OLIVARI-type brass handle with elastic sealing high-resistance compression gaskets, cases and backlining of suitably-thick wood; the window and French window frames will be made of 68 mm solid wood, complete with brass supporting hardware, made up of 3 brass “ANUBA” hinges and “MAICO” cremone inverted closure with three closing points, OLIVARI-type brass handle with elastic sealing high-resistance compression gaskets, cases and backlining of suitably-thick wood;
- Heat-insulating glazing panels made up of double 4-4 mm glass, combined by 0,38 mm plastic film. 12 mm-thick dehydrated air hollow space, 6,00 mm thick glass pane, for a total thickness of 26,00 mm;
- The shutters of the Bathroom/Laundry and the kitchen/kitchen corner rooms are equipped with DK (hopper type) opening, in compliance with the current regulations on energy saving, Law 10/91;
- The external shutting consists of Aluminium mobile-slat Shutters or Large Panels, complete with hardware;
- The internal doors of the flats and accessory rooms are made of swing solid wood, painted in shades at choice with 45 mm finished thickness, complete with pre-walled wooden subframe, brass hinges, standard key lock and satin aluminium handle;
- Where required, the entrance door will be made of armoured-type 55 mm thick Meranti Mahogany Wood, with laminated steel frame, central safety lock driving three pairs of 90x210 cm frame-linking pins, eyehole, draught excluders, external panel in accordance with the local topology and internal panel finished like the internal doors.





MEDITERRANEUM  
S A R D I N I A N S E A



## 19. PLUMBING, DRAINAGE AND SANITARY FITTINGS

The plumbing, drainage and sanitary fittings include: first-rate piping for potable water distribution (double line: hot and cold) to the flat services and to all necessary systems and accessories; it will consist of multi-layer piping. All drains will be equipped with Geberit piping to insert between the sanitary fittings and the vertical columns; all sanitary fittings are described further ahead. The network of hot water from the independent boiler of each flat will feed the bathroom and kitchen fittings. The supply and installation of sanitary fittings and relevant taps is also included.

Downstream the meter of each flat and at the base of the column a lock gate will be installed, complete with built-in drain cock. A stopcock with a chromium-plated cap will be installed on the branches of each single service room.

The calculation and diagram of said supply and drain piping and connections will be established by the system calculator, according to the directions of the Works management.

The size of the piping will be carried out by taking into account the operating simultaneity between sink and lavatory pan, as well as the risers and the distributors.

Each unit will be equipped with mixer groups by IDEAL STANDARD, CeraPlan for the washbains, bath tubs, showers and bidets; and connections for washing machines and dish washers for drainage. The following fittings will be installed:

### KITCHEN

- connection and drainage for dish washer and sink.

### BATHROOM

- Ceramic shower tray, 80x80 cm or semi-curved, according to the directions of the Works management, complete with crystal shower cubicle and walled sliding rail for spray head;
- wall-hung sanitary fittings;
- ESEDRA-Ideal Standard pedestal wash basin complete with accessories and taps with pop-up waste and bottle trap;
- ESEDRA-Ideal Standard lavatory pan complete with pvc seat accessories and Pucci or Geberit toilet tank;
- ESEDRA-Ideal Standard bidet, complete with accessories and taps with pop-up waste and S-shaped trap;
- connection to washing machine (only if the laundry is not provided).

### LAUNDRY (where provided)

- washing machine connection;
- Ideal Standard washtub Vulcano, 420x380, complete with accessories and taps with pop-up waste and bottle trap.





MEDITERRANEUM  
S A R D I N I A N S E A

Obviously all fittings will be complete with chromium-plated wall elbows with rosette, chromium-plated supply and drain cleats and wall connectors. N.B. The position and number of the fittings provided in each housing Unit is established in the location plans attached with the promise to sell.

## 20. HOT WATER DISTRIBUTION AND PRODUCTION SYSTEM (Bill 46/90, chargeable to the contracting firm, if required)

Each Estate Unit will be equipped with a Hot water Production and distribution system by the installation of a low-consumption heat-pump water-heater located in suitable place according to the Current Regulations. The complete system calculation of the diameters of piping and radiating surfaces will be established by a heat engineer appointed by the building firm and approved by the Works management.

The rising pipes will be insulated as per regulations.

The pipe fittings, the special items, the insulation of the piping and whatever is necessary to complete the system in every respect will be included.

## 21. ELECTRICAL SYSTEM, ENTRYPHONE SYSTEM, prearrangement OF VOLUMETRIC ALARM SYSTEM, SATELLITE TV SYSTEM

The system will be set up with materials having the following characteristics:

- Recessed pvc-based thermoplastic flexible pipe, I.M.Q. marked according to the CEI 23-14 standards, 25 diameter, heavy type (according to the new regulations) for underfloor runways, electric lines, etc.
- Flame-proof flexible-type NO/VK conductors according to CEI 20-22 standards, abrasion-proof with suitable sections according to the regulations (1,5 sq mm light circuits, control and presel 0A; 2,5 sq mm for sockets up to 16 A; 4 and 6 sq mm for the supply lines).

Control, signalling and safety devices with quality trademark Bi-Ticino – Vimar - Gewiss or Primary national Brand.

The rising pipes will leave from the meter room located on the street front, according to Enel's provisions and directions.





MEDITERRANEUM  
S A R D I N I A N S E A

## DESCRIPTION OF THE SYSTEMS:

### a) ELECTRIC

Common access room / according to the lighting diagram

no	1	1 light source complete light point control (interrupted)
no	2	4 compartment branch box
no	1	10-16A 2 pole bivalent socket + T with shielded contact tubes
no	2	3 station engineering polymer electrode, basic colours

### STANDARD FLAT

#### Living room

no	1	3 light source complete light point control
no	1	2 light source complete light point control (two-way)
no	1	2 light source complete light point control (two-way)
no	2	10-16A 2 pole bivalent socket + T with shielded contact tubes
no	5	10A 2 pole socket + T with shielded contact tubes
no	1	Ringer for plate push-button call
no	1	Ringer for bathroom and bedroom call
no	2	PLUG connector-type telephone socket, 2 pairs
no	2	Shielded TV socket for antenna system

Engineering polymer cover, 3 station, basic colours, according to sockets and switches.

#### Cooking zone

no	1	1 light source complete light point control (interrupted)
no	1	10-16A 2 pole bivalent socket + T with shielded contact tubes
no	1	10-16A 2 pole socket + T with shielded contact tubes for oven
no	1	Bipolar switch for oven socket control
no	1	16A 2 pole socket + T with shielded contact tubes for dish washer
no	1	Bipolar switch for dish washer socket control
no	1	10A 2 pole socket + T with shielded contact tubes for hood
no	1	10A 2 pole socket + T with shielded contact tubes for cooking top
no	1	10A 2 pole socket + T with shielded contact tubes for refrigerator
no	4	10A 2 pole socket + T with shielded contact tubes for kitchen top
no	1	Shielded TV socket for antenna systems
no	1	PLUG connector-type telephone socket, 2 pairs
no	1	Gas detector connection presetting

Engineering polymer covers, 3 station, basic colours, according to sockets and switches.

#### Porch / Veranda

no	2	2 light source light point control, complete with luminaire and lamp (2-way)
no	1	Additional light point
no	2	10-16A 2 pole bivalent socket + T with shielded contact tubes
no	5	IP55 engineering polymer, 3 station, basic colours

#### Access room

no	2	2 light source light point control, complete with luminaire and lamp (2-way)
----	---	--

#### Double room

no	1	3 light source complete light point control
no	2	10A 2 pole socket + T with shielded contact tubes
no	1	10-16A 2 pole bivalent socket + T with shielded contact tubes
no	1	10A 2 pole socket + T with shielded contact tubes
no	1	Shielded TV socket for antenna system
no	1	PLUG connector-type telephone socket, 2 pairs

#### Bedroom

no	1	3 light source complete light point control
no	2	10A 2 pole socket + T with shielded contact tubes
no	1	10-16A 2 pole bivalent socket + T with shielded contact tubes
no	1	10A 2 pole socket + T with shielded contact tubes
no	1	Shielded TV socket for antenna systems
no	1	PLUG connector-type telephone socket, 2 pairs

Engineering polymer covers, 3 station, basic colours, according to sockets and switches.

#### Bathroom

no	1	1 light source complete light point control
no	1	1 light source complete light point control for wash basin
no	1	10A 2 pole socket + T with shielded contact tubes
no	1	10-16A 2 pole bivalent socket + T with shielded contact tubes
no	1	Safety pull button



MEDITERRANEUM  
S A R D I N I A N S E A

**SUNDRY ITEMS:**

Lines and Switchboard

Equipotential piping system

Main telephone line 10 sq mm 220V

- no 1 Switchboard 36 Modules with circuit breakers and magn. complete with:
- 1 Built-in box 36 Modules with door
- 1 General Disconnecter 2x63A
- 1 General circuit breaker 25A 30mA First Floor Area
- 1 Magnetohermic switch 16A for 16A sockets
- 1 Magnetohermic switch 10A for 10A sockets
- 1 Magnetohermic switch 10A for lighting
- 1 General circuit breaker 25A 30mA Ground Floor Area
- 1 Magnetohermic switch 16A for 16A sockets
- 1 Magnetohermic switch 10A for 10A sockets
- 1 Magnetohermic switch 10A for lighting
- 1 General circuit breaker 25A 30mA Basement Floor Area
- 1 Magnetohermic switch 16A for 16A sockets
- 1 Magnetohermic switch 10A for 10A sockets
- 1 Magnetohermic switch 10A for lighting
- 1 General circuit breaker 25A 30mA Sundry items
- 1 Magnetohermic switch 10A for Boiler
- 1 Magnetohermic switch 10A for Entryphone
- 1 Modular transformer 220/12

Counter area protection

- np 1 Switchboard 8 Modules with circuit breakers and magn. complete with:
- 1 Built-in box 36 Modules with door
- Differential Magnetohermic switch 20A 300mA for housing unit

EARTHING SYSTEM

- no 1 earthing system through earth plates
- Earthing system with 4 complete earth plates and related tests
- no 1 Riser for housing unit earthing

a) Counter Area Protection

- np 1 Switchboard 4 Modules with circuit breakers and magn. complete with:
- 1 Built-in box 36 Modules with door
- 1 General magnetohermic differential switch 25A 30m

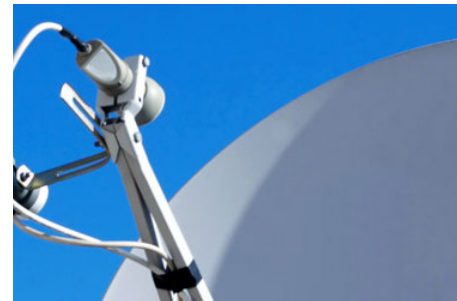
- b) Entryphone system
- 1 External push-button panel 1 push-button
- 1 Call module 1 push-button
- 1 Sound group for push-button panels
- 1 Power supplier for entryphone systems
- 1 Entryphone devices
- 1 Control unit for entryphone system
- 1 Cable for special entryphone system
- nr 1 Switchboard for entryphone devices and sundry supplies

d) TV ANTENNA SYSTEM

Centralized TV antenna system for 14 housing units, consisting of:  
 1st channel reception antenna  
 2nd channel reception antenna  
 Fifth band antenna for private channel reception  
 12V TV switchboard  
 Channel mixing amplifier  
 Dividers for signal diversion  
 Rising cables  
 Line complete with piping for TV Antenna

e) SATELLITE RECEPTION SYSTEM

Centralized SAT reception system for 12 housing units, consisting of:  
 Satellite Dish Mt 0,8 TELEWIRE  
 Low-noise converter TELEWIRE  
 SAT dividers -1 input - 2 outputs  
 Rising cables





MEDITERRANEUM  
S A R D I N I A N S E A



## 22. PAINTING AND VARNISHING

Painting of the external walls, pillars, balconies, eaves with mineral silicate paint, SIKKENS-, TERRANOVA-, CORISILK-type, by preventive dry cleaning with dust removal, application of an undercoat and two finishing coats with roller. The type, shade and colour will be chosen by the Works management from special compositions of different colours.

The ceilings and the wooden eaves will be double coated with primer, in a shade to be defined with the Works management.

Painting of plastered ceilings and housing unit room walls with a coat of fixative inhibiting paint and two coats of white water paint.

Internal walls, common spaces, staircases, painted with satin washable paint, type, shade and colour to be chosen by the Works management, while the ceiling will be painted with a fixative inhibiting paint and two coats of white water paint.

## 23. FENCING AND ARRANGEMENT OF GREEN PRIVATE AREA

The lot delimiting external fence will consist of a concrete wall and railings designed by the Works management along the municipality street side and Calabria private street side, and finished by hot galvanizing.

The fencing of the other sides and the partitions between the various privately-owned yards will consist of a concrete wall 30 cm high and overhanging metal plastic-coated wire mesh fastened to metal plastic-coated poles.

The flooring of all external operating spaces, parking spaces, yards and pavements will consist of a concrete floor with a printed flooring pattern. The Flower-beds will be finished with concrete kerbs and tilled land.

## 24. PRIVATELY-OWNED PERIMETER FENCING

The whole privately-owned area shall be fully fenced and delimited by a suitable reinforced concrete wall, complete with suitably-sized foundation, reinforced concrete wall measuring 20 cm in thickness and 50 cm in height minimum and overhanging galvanized iron barrier with minimum height of 120 cm.





MEDITERRANEUM  
S A R D I N I A N S E A

## 25. IRONWORKS, BARRIERS, BALCONIES AND VEHICLE/PEDESTRIAN GATES

The vehicle and pedestrian gate on Via Calabria will be manufactured with a simple pattern and at the discretion of the Works management, including the vehicle gate automation with remote control if requested (no. 01 per housing unit) and with key (see description of electric system).

Pedestrian gate on Via Calabria and Parking Area made of iron section bars with a simple pattern and at the discretion of the Works management, complete with entryphone-controllable electric lock.

Outdoor letter boxes will be provided, made of top quality stainless steel or aluminium, on building instructions from the Works management. The fixed air grilles of the air vents that are to be laid in the areas specified as skylight well will be made of standard hot galvanized iron section bars, "Orsogrille"-type, heel-safe fine mesh, including the drips.

The balcony parapets will be made of iron section bars, as specified in the planning graphic drawings, with suitably-shaped handrail on the upper side (or similar, with simple pattern). All the stairs leading to the single Estate Units and to the common access areas, such as on the first Floor, will be made of a simple pattern barrier, 100 cm high, supported on the lower side by a plate of 40 x 10 section and by a suitably-arc-shaped handrail on the upper side (or similar, with a simple pattern).

## 26. FIXTURES METER ROOM

As regards the Power and Water supply meter room, it will be constructed according to the provisions of and in the position indicated by the Works management. The structure will be made of reinforced concrete or concrete prism blocks, metal closing door suitably-ventilated according to the planned meter room.

(gas-methane with ventilation grille according to the provisions of the cognizant authorities).





MEDITERRANEUM  
S A R D I N I A N S E A

## 27. AIR CONDITIONING SYSTEM

Multiplit air conditioning system for each Housing Unit (at least 2/3) with prearrangement of Outdoor Unit to place on the veranda or porch, while the Indoor Units are to be installed in the living room/ cooking corner and bedrooms. The system shall be supplied in place and in working conditions, comprehensive of masonry and electric assistance and the preventive fitting of suitable built-in boxes complete with canalization for condensation drainage, electric system and copper piping to reach the area where the outdoor unit is fitted (compressor).

## 28. ANTIFALL GUARD

On pitch roofing a suitable fixed antifall device shall be provided, according to the European Directives 89/686/CEE, adopted in Italy with the L.D. 626/94, L.D. 494/96 and 528/99; (only if required by the Technical Office).

## 29. EXTERNAL LIGHTING

In the outdoor common spaces (driveways, ramp, swimming pool area, common walkways and entrances) watertight wall and pedestal lamps will be installed, complete with energy-saving luminaire at the discretion of the Works management.





MEDITERRANEUM  
S A R D I N I A N S E A



### 30. A COMPARTMENT SWIMMING POOL AREA

Reinforced concrete swimming pool with tropical water effect PVC cladding, or other suitable material, with wastewater treatment and recirculation plant and night lighting. The size will be agreed upon with the Technical Office, suitably for the reception of the housing units.

Outdoor solarium paved with suitable material.







MEDITERRANEUM  
S A R D I N I A N S E A

**OPTIONAL SERVICES\***  
**MEDITERRANEUM SWIMMING POOL**  
**- HYDROMASSAGE – WELLNESS AREA - fitness**

Reinforced concrete swimming pool with tropical water effect PVC cladding, or other suitable material, with wastewater treatment and recirculation plant and night lighting.

Outdoor solarium paved with suitable material.  
 Infinity pool Jacuzzi with complete overflow for lumbar and foot massage.  
 A bar for drinks, snacks etc. will be set up next to the swimming pool.  
 Sauna cabin built to measure inside the preset room, made of wooden panels, complete with ladle, peridotite stones and sandglass.  
 Turkish bath complete with lighted vault with constellation made up of optical fibre light points.

Mini hydromassage swimming pool (Jacuzzi or similar) complete with lumbar and plantar massage.  
 Emotional shower with “Tropical Rain” and “Cold Mist”, complete with spotlights for chromotherapy and automatic dispenser of aromatic essences.  
 First-rate relax loungers.  
 Indoor and outdoor fitness area complete with specific homologated apparatus, TecnoGym or similar.  
 Outdoor relax area adjacent the Wellness area.





MEDITERRANEUM  
S A R D I N I A N S E A

**SISTEMACASA**