EUROMAC 2 building system - Walls construction Architects Notes

Introduction

Euomac 2 walls are made from two insulating layers made from high density Neopor, connected to each other by metal struts and reinforced by horizontal steel cast into the Neopor.
As one of the most advanced ICF, Insulated Concrete Forms, The combination of Neopor and steel reinforcement enable one to build a solid insulated structure.
The range also includes special elements enabling one to build varying heights, round walls and wall angles from 0 to 180 degrees.

The full manual has details on the products, installation and the technical properties described.

Directions for use

The layers or courses, of Euromac 2 are assembled by simple dry jointing, with crossed joints. To stabilise the wall and maintain a level surface, Euromac 2 Struts are fixed to the elements to ensure that the wall is straight, level and vertical.
The Euromac 2 acts as shuttering and is then pumped with concrete, N25, 8-10 aggregate, 85 slump.

Structure

The Euromac 2 walls are therefore solid concrete and have all the advantages of such structures; additionally combined with the Euromac 2 Flooring system a full insulated structure can be achieved.

Thermal Insulation

U Value = from 1.6 to 3.0
Total suppression of cold bridges. Rooms can be warmed up quickly, resulting in even lower heating costs.

Sound Insulation

The insulation for sound are excellent as the structure is a solid concrete combined with the insulation material this gives excellent impact and ambient sound proofing properties.

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External finish

A sprayed plaster render can be applied, or any alternative subject to suppliers recommendation, note however the solvent based adhesives cannot be used as these effect the Neopor.

Internal finish

Spray plaster or tape and skim can be used.

Increased Area

As the Euromac 2 walls have a standard thickness from 250 mm to 450 mm, there is additional living space as compared to a conventional 300 mm.

Speed

Because of the design Euromac 2 allows for speedy build, one can estimate comfortably 1 m2 per 15 minuets for an experienced team of three.

Economic

In order to build Euromac 2 there is no wet work in construction.
The construction is not weather dependant.
Low skill, single team for all the build educes waste and time managing labour.
Quick, resulting in lower on site costs.
Higher insulation resulting in lower on going heating bills till 84%.

General Notes

Large Elements	- 1000 mm x 300 mm = 0.3 m2 Rapid, painless and clean work.
Light	- 3,3 kilos per m2 No lifting equipment
Complete System	- Walls / Floor / Roof. Low skill high speed.
Dry assemble	- Not weather dependent.
Concrete pumped	- One story at a time – maximum 4000 mm in a single pour.
Watertight	- Water-repellent and rot-proof.

EUROMAC 2 building system - Walls construction
Architects Notes for planing

- Metric based system based on 50 mm receivers on the horizontal
- Metric based system based on 100 mm steps on the vertical.
- The most efficient construction is based on 250 mm centers.
- Walls are from 250 mm to 450 mm thick
- Round walls available at no increase in the overall costs.
- The system is based on a square meter price and therefore there is no addition costs for more complicated designs.
- Quotations can be given for materials only or a supply and fit.
- Highly insulated building, resulting in low running costs.
- Services can be placed into the walls prior to pouring.
- Single team construction.
- Measurable and manageable progress, easy to manage easy to monitor.
- Limited waste.
- Limited tool requirements.
- Concrete structure.