



TECHNIUM
SPACE

WELCOME
TO THE
FUTURE

2D

INTEGRATED
TECHNOLOGY

GENERAL AND
TECHNICAL DATA

i-Technology

70%
LESS
TIME

65%
LESS
MANPOWER

100%
HIGH
QUALITY

Advantages of **2D** integrated Technology *(over traditional construction)* include:

- Advanced-completion modular section panellised LGS structure
- Cold formed, hot-dipped, galvanised steel
- Easy and rapid panel erection and construction
- Minimal tradesman requirements
- Resistant and compliant to global climatic and geologic conditions *(Earthquakes, hurricanes, temperature etc)*
- Increased strengths to impact
- Thermally and acoustically insulated *(e.g. mineral based Rockwool, XPS etc)*
- Numerous wall dimensions, specifications and finish options
- Energy Efficient
- Resistant to weather transfer and moisture
- Waterproof
- Fire resistant
- Recycled materials
- Sustainable and Environmentally Friendly
- Zero / low maintenance



External and internal walls are of multi-layer, multi component design, and are all manufactured featuring a High Tensile steel frame, providing exceptional structural strength and rigidity.

In simple terms?

Imagine a made-to-order take-away multi-filling sandwich or a 'Double Big Mac'!

For ourselves, the fillings comprise of everything such as vapour shields, OSB, wind barriers, 'Tyvec' paper, structural steel frame, compressed insulation and electric ducting etc, all tightly packed between an outer layer of FCB (*fibre cement board*) and an inner layer of MGO. (*Magnesium Oxide Board*)

Maybe less appetising, but certainly far better for your health and long-term well-being!

INSULATION AND ENERGY EFFICIENCY

Walls in all instances (*both external and internal*) feature exceptionally high levels of both thermal and acoustic insulation, again varying with requirements and end-user specifications.

These high performance walls are available with a wide selection of insulation and load strength qualities and capabilities, and are able to address the most extreme and varied of global and climatic conditions. - Cyclone, (*wind*) seismic, snow etc.

When supplied in their highest specification, (*such as for code TEK10*) and as shown in the drawings and following detail, their make-up comprises in their more technical terms, a central and substantial corrosion-resistant High Tensile Steel-frame, with a double inner core of 2 x 70mm RockWool insulation.

The two layers of 50mm High Density RockWool is sandwiched between two structural skins of 10mm OSB (*Oriented Strand Board*) various vapour/wind barriers, internally facing 10mm MGO, (*Magnesium Oxide Board - Environmentally friendly. Resistant to fire, water, rot, freezing and termite infestation*) and externally FCB. (*Fibre cement Board.*)

This forms a very rigid structure with excellent additional insulation and fire resistant qualities. (*Exceptional specifications capable of addressing the most extreme of global conditions.*)

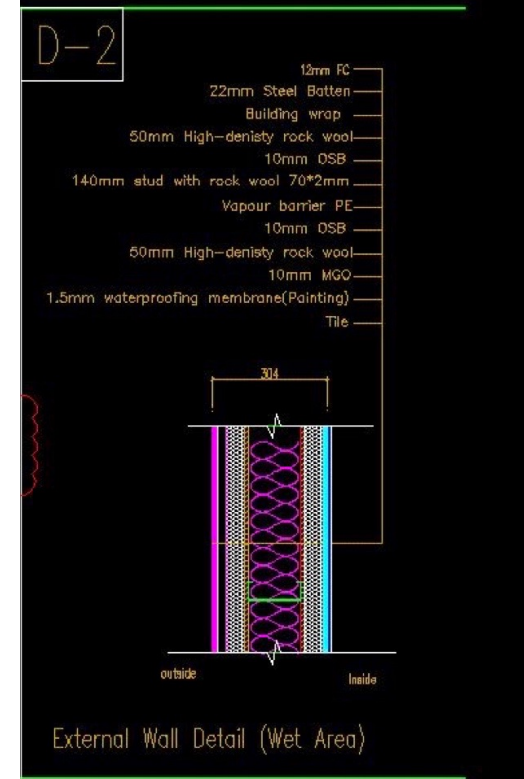
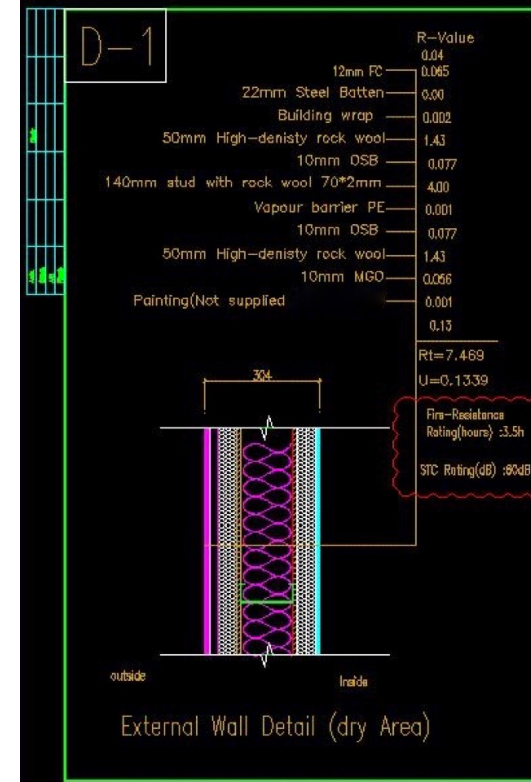
The numerous layers and the additional inclusion of items such as wind barriers, vapour shields, breather membranes etc, all increasing the strength and insulation qualities to form a very environmentally friendly and energy-efficient building.

Eco Friendly Energy Efficiency working both ways.

Keeping heat in when required, and keeping it out when it's not.
Advanced structural refinement that addresses all climatic conditions.

The result:

- No cold bridges.
- Internal damp and mildew forming spores etc., are now a thing of the past.
- A serious and worthwhile consideration for those with respiratory problems.
- Energy Efficiency at it's best.



STEEL-FRAME PERFECTION

Technium Space 2D steel-frame structures are based on a professional U.S. technique, providing a quick and economical solution for both small and large buildings (*direct span of 15m-50m*) and with standing seam technology for secure waterproof roofs.

Our constructions are both thermally and acoustically insulated either according to, or bettering all current building regulations, and accordingly are compliant to ISO 9001:2009, and also globally complying to EN1090-1. - The strictest standard in the world for steel constructions.

In global locations where different loads are applicable, e.g. Norway requiring excessively stringent certification code TEK10 for snow-loading, or the Caribbean where increased wind loads are applicable, when the steel frames will be produced to address and comply with all local stipulations and be both Hurricane compliant and/or Earthquake Zone complaint as applicable to the appropriate levels of specification.

The basis for the system is a variety of high-strength, corrosion-resistant steel manufactured items that are fully developed, tested and approved. When combined, they can create a wide spectrum of building shapes and can be adapted to suit any plans, designs or user's requirements.

The structural steel-frames carry a 50 year warranty. - (*Life expectancy in excess of 75 years.*)

Technical:

We utilise LGS (*Light Gauge Steel*) C-sections ranging from C150 - C75, with thickness ranging from 0.6mm to 2.5mm for wall, floor and roof framing. All LGS members are galvanised, pre-cut, pre-punched and project labelled before assembly.

For larger, multi level, and commercial projects, where HGS (*Heavy Gauge Steel*) structural framing is incorporated, this would typically be of Grade: GB-Q235, yield strength ≥ 235 MPa, including factory welding and sandblast (*Sa2.5*), painted with Epoxy Zinc Rich paint.

The LGS for example for Wall Frames / Roof Truss / Floor Truss etc, would be cold formed steel in 'C' and 'U' sections, wall studs spacing @ 600/610 nominally*. Grade: SGH440, yield strength ≥ 335 MPa. Coating: Galvanized Z275.

* For locations where hurricane compliancy is required, then structures would include additional cross-bracing, studs reduced to 400mm (*and closer if applicable*) plus additional chemical bolt locations. Seismic zone requirements would be addressed in similar manner, subject to the levels required.

For all structures, installation is simple, fast and safe utilising and based on standard foundation systems. The advanced design allows for rapid erection incorporating low-tech, fail-safe jointing mechanisms. Individual units are weatherproof, ensuring interiors remain protected throughout construction.

Residential construction external wall panels can be of any specification, but are generally up to normal maximum of 240mm thick to achieve all specification requirements, (*excluding finishing etc*) and internally between 120mm and 170mm.