



**SPEC HYBRID  
CONSTRUCTION  
TECHNOLOGY  
BROCHURE**

The SPEC Hybrid is an advanced, sustainable and effective technology that combines rapid techniques with eco-friendly materials to provide a rigid structure that is cost-competitive and quickly-built. This technology offers:

- Permanent, rigid, and solid structure
- Designed and engineered to withstand strong winds and earthquake loads
- Built offsite and installed with minimal labor, all while being extremely rapid in completion time
- Green, sustainable, and eco-friendly construction

**OUR OFFSITE BUILDINGS  
CAN BE OFFERED IN  
THREE VARIATIONS:**

- 01.** **Mobile Solution**  
*Fully Assembled*
- 02.** **Panelized Solution**  
*Partially Assembled*
- 03.** **Flat-Pack Solution**  
*Unassembled*



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**THE SPEC  
HYBRID**

# Purpose

Certain construction systems/technologies have limitations that could be general and/or project-specific.

The **SPEC Hybrid** is a methodology that removes the limitations of the construction systems under use while maximizing each individual system's benefits on the basis of a case-by-case proposition.

There are numerous combinations of the **SPEC Hybrid** and we recommend that you present us with the needed data so that we may propose the most suitable combination.

## Approach

We study each scenario on a case-by-case basis to provide a solution with the most optimal case-specific price-to-quality ratio.

Different projects may have different system compositions varying according to the project requirements, location, timeline, target end-user, among others.

Through **SPEC Hybrid**, we intend to deliver construction solutions at an extremely rapid rate with 60 to 90% of the work completed off-site in a controlled environment. Moreover, we have the Technical and Human capacity to carry out the entire design process along with a full EPC solution.

## Design Considerations

Although the **SPEC Hybrid** combinations are several, all systems hold the same underlying design considerations that are essential factors contributing towards delivering a superior and ideal solution.

When proposing a project using the **SPEC Hybrid**, we follow certain guidelines to ensure that the individual constituents of the system help attain the minimum required construction speed and insulation values.

Moreover, we aim to minimize energy consumption and waste across the whole lifespan of the structure - starting from the design phase.

## Types Of Structures

Many misconceptions surround the general notion of modern construction. The facts are that through SPEC Hybrid, we can deliver solutions catering to all budgets, architectural scopes, number of floors, and end-use of the structure – all much more efficiently.

- Residential Houses and Villas
- Apartment Buildings
- Restaurants, Shops and Centers
- Hotels and Lodgings
- Offices and Showrooms
- Camps (Oil & Gas, Mining, Construction)
- Hospitals and Clinics
- Temporary Accommodation
- Warehouses and Storage Units

## Main Elements

- Offsite Panels
  - Built-in MEP
  - Built-in Automation
  - Built-in Windows
  - Built-in Doors
  - Lightweight Concrete Infill
  - XPS Foam Board Infill
  - Lego-like Connectors
- Offsite Frames
  - Built-in MEP
  - Built-in HVAC
  - Sheathing Boards
  - Cladding Boards
  - Mineral Wood Insulation
  - Weather Barriers
  - Lego-like Connectors
- Fixtures and Fittings

## Variations

- Load Bearing
- Non-Load Bearing














# COMPARISON CHART



## SPEC Hybrid vs. Conventional Construction

### Conventional Block Construction

### SPEC Hybrid Construction

	Heavy material and labor requirements	Economical, particularly when considering quality level and speed
	Slow and idle time between casts	Quick installation with zero idle time
	High manpower required with quality highly dependent on laborer experience and skill	Most of the work takes place during fabrication. On-site erection is easy and standardized
	Must be constructed on site and is costly if site is secluded	Can be delivered anywhere
	Limited flexibility in design	Very Flexible design
	Low space efficiency (floor area is lost to thick block construction)	High space efficiency through thinner walls
	Low and inefficient thermal insulation	High thermal insulation
	Good acoustic insulation	High acoustic insulation
	Heavy with higher foundation costs	Lightweight with savings on foundation and labor
	Weather significantly affects construction quality and duration	Relatively unaffected by bad weather conditions
	Accuracy is highly dependent on labor skills	Machine precision in controlled environment

## VALUE ADDED

To realize significant cost and time savings plus much more...

**Between x2 and x3** the speed of conventional block construction

**Between x3 and x7** higher insulation levels compared to conventional block construction

Most importantly **100% superior** structures compared to conventional block construction.