



Habinest G- Plus : Multistoried Housing Solution

(with Frame-Cad Technology)

Habinest G- Plus Multistoried Housing solution is based on established system of light gauge steel frame (LGSF) structures. This is designed as per Indian Code of Standards with all loading requirements, and considering all environmental considerations such as cyclonic, fire, and seismic, by in house TATASTEEL engineering team which consist of Chartered Engineer (CEng) and structural engineers with more than 15 years of experience.

Unique Benefits over “Dipple Click” or other LGSF Solution:

High Precision : The sections are manufactured using **Centrally Numerical Control (CNC)** automatic Roll Forming machine with very high precision, Steel frames will be consistently accurate to within $\pm 0.5\text{mm}$ every time. Assembly errors are also minimized as fastener holes are pre-punched. Label references are printed on each steel member for quick and easy assembly.

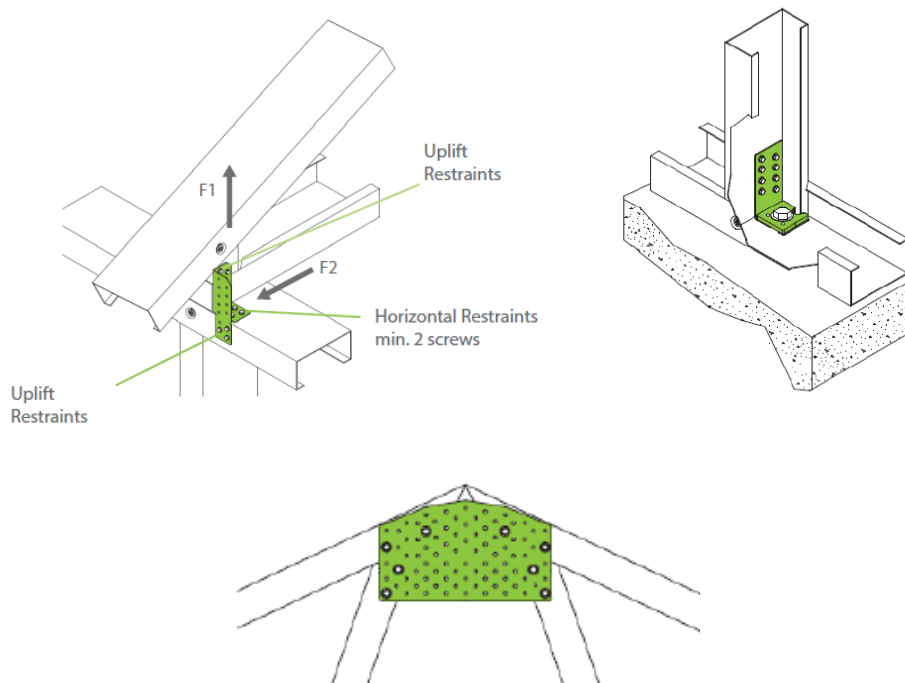
High Structural Stability: High strength to weight ratio. Due to low weight, significant reduction in design earthquake forces. Here chances of progressive collapse are marginal due to highly ductile and load carrying nature of closely spaced studs/joists. Blocking of Trusses is used for better positioning and stability.

Roof trusses can be virtually of any shape or profile for residential building.

Ex. Two way Slope, Four way Slope etc.

No structural reliance needed on wall boards: In other LGSF solutions trusses are placed on complete wall sections which consist of steel and wall board also. As Wall Boards are not designed to support structural loads, in this solution all trusses are placed only on structural members.

No Axial Forces on Connection Bolts: Connections are made with specially made connector plates which is particularly designed so that the bolts experience only shear force, no any tensile or compression forces against which bolts are weak.



Ranges of Walling Options : Here in Habineest we use Cement Bonded Particle Boards and Ferron Boards also which made of ferro-cements and fixed with Ferron Seal which makes the walls a crack free one.

Load Bearing Wall Surface : The wall surface can be used to hang and fix things (AC, TV etc) as needed by the method of screwing.

Major Features:

- Quality Structures
- Use of Cutting Edge Software
- Less Wastage, Greater Recyclability.
- Dimensional Accuracy.
- Safer Construction.
- Use on Infill Sites, remote locations.
- Fire Resistant.
- Light Weight.

Advantage of Habineest over RCC or MS Structural Housing Solutions:

Solutions: Parameters:	Brick & Mortar/ RCC Housing	MS/Tubular Structural Housing	Habineest Frame-Cad
Construction Duration	1 Yr (Approx)	5 Months (Approx)	5 Months (Approx)
Quality Control	Difficult to control on site control workmanship	Difficult to control on site Welding Quality	Factory made fabrication, High quality control
Resource Engagement	Multiple Sourcing of resources and solutions (Material & Manpower)	Single point solution	Single point solution
Maintenance	Low	High (corrosive structure)	Low (galvanized structure)
Strength/Weight Ratio	Low	Low	High
Requirement of Soil Condition	High SBC (soil bearing capacity)	High SBC required	Low SBC also acceptable

Sample Specifications :

Sr No.	Component in Building	Specification	Thickness	Code
1	Civil Foundation	Plain Concrete Slab (M15) with Light Gauge Members/ RCC M20 Slab		
2	Wall Frames	Cold formed light gauge steel frame super structure - 550 MPA Yield Strength. ASTM A1011M	0.7mm to 1.15mm	ASTM A1011M
3	Roof Sheet	Pitched roof with Color Coated Galvalume Sheet/ Roofing system using Color Coated Galvalume sheet, Roof Insulation and Wire Mesh	0.47 to 0.5mm	ASTM A 792M
4	Wall Panels	Cement Bonded Particle Boards/ 20mm thick Ferron Panels for Internal & External with rubber gasket under the structure along with jointing compound	10mm - 20mm	IS 14862:2000
5	False Ceiling	Gypsum Boards/Mineral Board	12.5 mm	IS 2095 - Part I, 2011
6	Decking Floor	Light Gauge Beams with Boards	50 mm	IS 8183,3144,3346
7	Flooring Type 1	Vitrified Tiles of size 2'x2'	9-10mm	IS : 15622:2006
8	Flooring Type 2	Ceramic glazed floor tiles of size 1'x1'	9-10mm	IS : 15622:2006
9	Wall Tiles	Ceramic glazed wall tiles of size 8"x12"	6-7mm	IS : 15622:2006
10	Flush door shutters	flush door shutters	30mm	IS: 2202 (Part I)
11	Door	Aluminum powder coated sliding Doors of 18 Gauge, Two Track, sliding Type in 3/4" series, with 5mm thick Glass/ Toughened Glass doors		
12	False Ceiling	Gypsum False Ceiling/ Metal False Ceiling		
13	Paint Internal	Premium Emulsion paints internal walls		
14	Paint External	Apex exterior paint		
15	Staircase	Light Gauge Steel Staircase/ HR staircase		
16	Other Accessories	Electrical Plumbing and Fittings	As per requirement	

Applications :

- Mass Housing – Urban/State Government Programme
- Staff Housing/Office for Green field or Ground field projects.
- Police/Military Housing.
- Institutional

