

Parameter	Pre Engineered Building	Conventional Steel Building
Structure Weight	PEB's are average 30% lighter through optimized design by tapered (varying depth) built-up sections with higher depths in the areas of highest stress.	Steel members are selected from standard hot rolled "I" Sections, which are heavier than what is actually required by design as the members have constant cross-sections regardless of varying magnitude of the local (internal) stress along the member length.
Steel Strength	High Tensile Steel used in PEB's having minimum (Ys) of 345 Mpa, which contributes to reduction of Steel consumption in overall.	Conventional "I" & "C" sections usually have minimum (Ys) of 245 Mpa, resulting in higher Steel consumption.
Design Speed	Design of PEB's is quick & efficient as the design process involve special dedicated international design software, international design codes & standard sections & connections.	The Design Consultant, resulting in excess design time with fewer design aids available to the Engineer, designs each conventional Steel structure from scratch. Generalized computer analysis programs require extensive input/output and design
Clear Spans	PEB's can be designed & erected with max clear span of 100 m. with low steel qty. consumption.	Conventional building can be for max 40 m. with high steel qty. consumption.
Civil Foundations	Simple & economical with larger span & higher column spacing, resulting in less number of foundations along length & width.	Extremely heavier footings & more number of footing because of constraints line lower column spacing & supports along width wise.
Erection Speed	Since the connections of the components are standard, the learning curve of erection for each subsequent project is faster.	The connections are normally complicated and differ from project to project, resulting in longer learning curves of erection for new projects.
Seismic Resistance	The low-weight flexible frames offer higher resistance to seismic forces.	Rigid heavy weight structures do not perform well in seismic zones.
Safety & Responsibility	Single source of supply results in total responsibility by one supplier, including design liability. PEB manufacturers can be relied upon to service their buildings, long after they are supplied, to protect their reputation.	Multiple responsibilities can result in questions on who is responsible when components do not fit properly, insufficient material is supplied, or materials fail to perform, particularly at the supplier/contractor interface. The consultant carries total design liability.
Performance	All components have been specified and designed specifically to act together as a system for maximum efficiency, precise fit, and peak performance in the field.	Components are custom designed for a specific application on a specific job. Design and detailing errors are possible when assembling the diverse components into unique buildings.