

BIP / PPVC / Vectorbloc compliance matrix

We have reviewed the Singapore BIP PPVC documents for compliance with the best practices guidance and market preferences as we understand them. We are happy to report that our system appears to be highly compliant with both the letter and the spirit of these requirements. The following table summarizes the requirements as we understand them, and the relationship of the Vectorbloc system to each item.

Item #	BIP Requirement / Guidance	Vectorbloc Compliance	Compliance methodology
1.	Mandatory items (page 2 of "CESS141031")	Comply	No mandatory feature described is incompatible, including pre-cast garbage chutes. Drywall partitions are supported
2.	PPVC System / Degree of completion	Top tier	Service connections and leave out covers @ bolting are the only building elements that must be completed at site, representing the highest achievable level of factory completion.
3.	Standardization	Top tier	Vectorbloc is a standardized PPVC system designed for deployment at multiple fabrication sites and well suited to simplified design process
4.	Simplicity	Top tier	Connection system has one loose part in addition to fasteners (gusset plate) and no requirement for adjustment except in exceptional circumstances
5.	Single integrated elements	Top tier	Vectorbloc incorporates connection features for multiple axes and structural building elements in one component
6.	Buildable design score	Top tier	Ease of connection, hoisting and placement all high
7.	Labour saving index	Top tier	Prefabricated railings, facades, balconies etc. are all explicitly supported
8.	Design without high voids	Top tier for PPVC systems	Vectorbloc does not require brace frames, brace cores, mateline voids etc. and building structure fits within walls
9.	2 hour rating for walls protecting structural elements	Comply	2 x 12.5mm overlapping board, can be upgraded if required
10.	2 hour rating for walls compartmentalizing	Comply	2 x 12.5mm overlapping board, can be upgraded if required
11.	Disproportionate collapse	Comply	Horizontal diaphragm system, truss action and moment connections all contribute to redundancy and alternate load paths
12.	Factory façade / balcony integration	Comply	Vectorbloc accessory connection points provide geometrically accurate connection for facades,

			balconies etc. facilitating easy installation
13.	Minimized crane cycle time	Comply	Quick rig and quick connect fittings reduce hook-release-hook cycle time. Software-integrated CG balancing reduces re-rigging time
14.	Road movement	Comply	Modules are structurally sound, sizes are variable, max height and max width are roadworthy in SG with and without escort
15.	Material economy	Comply	HSS structure and scalability ensure optimized material use
16.	Interchangeability between manufacturers	Comply	Vectorjig supports multi-site production and compatibility between suppliers
17.	Aesthetic requirement for floor quality	Comply	A cast concrete floor which preserves the diaphragm action can be integrated in to a Vectorbloc module
18.	In-process weather proofing	Comply	Absence of brace frames and brace cores facilitates weatherproofing. “Blue Skin” or EQ overlapping mateline cover provides in-process weather seal. Rain directed in to stack as required using “funnel accessory”. Roofs structures including parapets attach from below.
19.	Scalability (maximum height, minimization of material used)	Comply	Vectorbloc frames can be optimized for single story, mid-rise or high-rise use
20.	Service circulation	Comply	Potable water, sewerage, electrical and other services can be accommodated within partitions, floors, ceilings and risers in keeping with norms
21.	MEP offsite completion: Building systems	Comply	Modules can be 100% completed, leaving only service interconnection for the site. Hallways are designed as pipe and duct train carriers to further increase the degree of offsite MEP completion.
22.	MEP offsite completion: Service entry	Comply	Cable and service entry rooms and mechanical spaces can be fabricated offsite in main plant or trade-specific facilities
23.	Steel protection	Comply with intent	Due to size of chassis frames, recommend zinc-rich epoxy primer coating in lieu of galvanizing
24.	Condition survey	Comply	Structural connections accessible through access covers at all critical locations



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Disclaimer

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In this context, the images and descriptions of the Vectorbloc Modular Construction System provided by VBC, its principals, employees, agents and subcontractors are entirely conceptual in nature. VBC makes no warranty for the fitness of the Vectorbloc Modular Construction System for any application and both VBC and its insurers disclaim all liability for the use of the Vectorbloc Modular Construction System by any user.

It is the sole responsibility of the purchaser and / or end user to determine the applicability of the system and its components and derivatives for any application. Therefore, prior to conceiving, designing, fabricating or erecting a structure of any kind using any of the above noted systems or their derivatives, the user must contract the services of any and all third-party licensed architects, engineers and all other professionals such as code consultants, welding inspectors and mechanical designers as may be required to properly conceive, design, engineer, erect and supervise work on the structure.

Additionally, it is the responsibility of the user to determine what laws, standards and building codes apply to a project before, during and following construction and to seek and obtain all applicable evaluations, inspections and approvals required by all authorities and entities having jurisdiction.

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