PROJECT PROFILE

Market: Commercial
Type: Manufacturing Facility
Location: Katunayake, Sri Lanka

# PROPOSED ENERPHIT FACTORY BUILDING FOR STAR GARMENTS GROUP PRIVATE LIMITED AT FREE TRADE ZONE, KAYNAYAKE, SRI LANKA

## PROJECT SCOPE & SPECS

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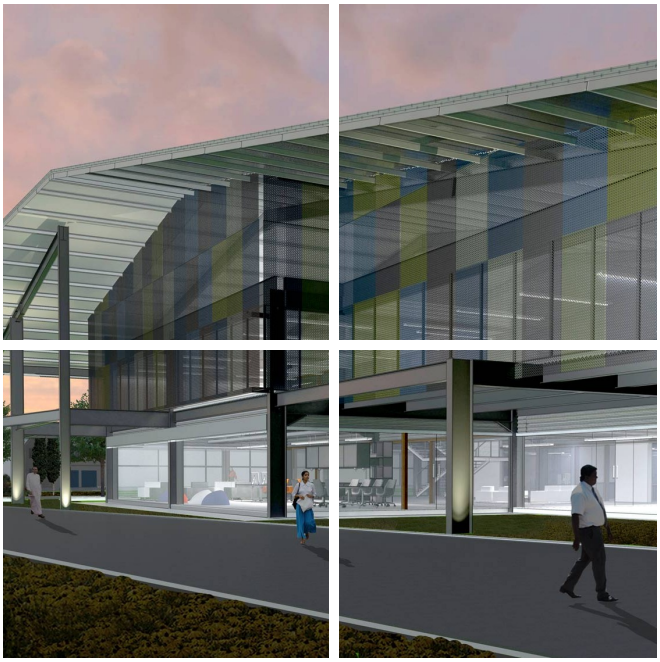
| **Developer / Owner:** | Star Garments Limited Subsidiary of Komar Industries |
| **Architect:** | Vinod Jayasinghe Associates (Pvt) Ltd. |
| **Certified Passive House Designer:** | Jordan Parnass Digital Architecture (JPDA) |
| **Project Services:** | Passive House Feasibility Analysis & Full Certification Services; Mechanical Design Services; Energy & Thermal Bridge Modeling; Testing & Verification |
| **Building Size:** | 40,000 sf; low-rise |
| **Certification:** | Passive House EnerPHit |
| **Primary Energy Conservation Measures:** | High performance curtain wall, advanced dehumidification controls for HVAC system, PV |



Steven Winter Associates is working remotely with a project team across the world to retrofit an outdated factory in Katunayake, Sri Lanka and turn it into an EnerPHit Passive House certified garment manufacturing facility. JPDA, the Passive House Designer of record for the project, recruited SWA to provide technical assistance to the project team. SWA services for this project include Passive House design analysis and recommendations, mechanical design review, energy and thermal bridging modeling, as well as testing and verification required for Passive House certification.

The team enlisted the guidance of the Passive House Institute early on in the project's development to tackle the many complexities associated with EnerPHit certification. This project's location in a hot humid climate combined with its use as a manufacturing facility resulted in a heightened focus on strategies to reduce gains from both the sun and from equipment and occupants in the space. A high-performing curtain wall, with a solar heat gain coefficient of 0.22, was designed in conjunction with strategically designed overhangs and external shading screens to reduce the overall heat gain into the building. The opaque portions of the thermal envelope will feature an Exterior Insulated Finish System (EIFS) to continuously wrap both existing and new structural components in insulation with minimal thermal bridging. All exterior surfaces coatings have been specified as low absorption or highly reflective to further reduce cooling loads. Proposed mechanical systems include advanced dehumidification controls that will utilize waste heat from the cooling system to enhance the dehumidification capacity. Controlling the humidity in the space is not only essential for Passive House certification, but also for ensuring optimal thermal comfort for the workers.

Construction began on the facility in the Fall of 2016. Because of the distance to the site, the project team relies heavily on technology to host meetings, visually inspect progress and ensure that construction complies with Passive House standards. Preliminary testing and verification efforts are planned for late summer. Project completion is scheduled for the Fall of 2017.