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TROX MALAYSIA NEW TEST LAB EXTENSION

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The new 3-storey extension has a total built-up floor area of 275 square meter, comprising of a training room, conference room, a new test lab and a HVAC plant room. The new test lab will be used to carry out mock-up tests for chilled beam and under-floor air distribution (UFAD) systems.

The training room and conference room are located on the Ground Floor for easy access from the main reception area. The floor-to-floor slab height for the Ground Floor level was kept to a minimum at 3.3 m high, primarily to demonstrate that with chilled beam system the ceiling void depth need not be as high compared with conventional constant air volume HVAC system. The typical height for each floor in the existing office building is 4.0 m high. The second reason for doing this is because the new test lab on the First Floor requires a raised floor system. Thus, in keeping the Ground Floor height lower enables the finish floor level of the raised floor in the test lab to be kept at the same level as the finish floor level of the existing First Floor.

The training room is able to accomodate up to 25 people including the trainer. The conference room has a maximum sitting capacity of 20 people. Both the training room and conference room are fitted with multi serivce chilled beams with dimmable T5 lamps to connserve energy consumption. The air-conditioned supply air comes from the General Air Handling Unit (AHU), a 'TROX X-Cube' fitter with EC fans for supply and exhaust air. Theis general HVAC system is fitted with energy valve to monitor the energy consumption for the purpose of in-house study. Each of these two rooms are also fitted with a state-of-the-art ultra-short throw LCD projector that comes with interactive functions capable of serving as white board as well.

The new text lab is built an air-conditioned room and the test lab has a floor area of m wide by 6 m long. It has a manually adjustable suspended ceiling system capable of varying the floor-to-ceiling height from 2.7 to 3.8 m high. The test lab is also fitted with a heated wall and floor to simulate solar heat gain. It is capable of testing up to three chilled beam test samples at any one time. The supply and extract air to the test lab comes from a dedicated TROX X-Cube air handling unit, which is also fitted with EC fans to serve only the Test Lab. Air conditioned supply can be supplied either directly to the active chilled beams at high level or to a UFAD system at low level via floor void. The general work area surrounding the test lab is also fitted with active and passive chilled beams.

All the air conditioning components that are fitted in the new extension including grilles and diffusers, volume control dampers, fire dampers, in-duct attenuators and weather louvers are manufactured and supplied by TROX Malaysia.