



## Water Tightness Test

(Quality Assurance and Diagnostic Water Leakage Performance Check of Installed Shopfronts, Curtain Walls and Sloped Glazing Systems)





Photos from: CONQUAS

- ❖ The Field Test Device to Assess the Water Tightness of Building Facade
- ❖ Generate the Effects of The Wind and Rain Simulation Device
- ❖ Ensure Installed Components as per required Performance
- ❖ Recommended by CONQUAS

## 1. Introduction

WTT services establish in 2018 as an independent tester specializing in site water testing on commercial building and residential building. Ken Lee lead the team to conduct site water testing. He has more than 20 years in the aluminium and glazing industry and has conducted site water testing for more than 6 years in his previous employment. He is also a qualified tester trained by WTT in Singapore.



## 2. Objective

The exterior enclosures of buildings, especially window, door, curtain wall, skylight and building cladding must resist weather conditions as withstand wind and rain.

To compromise overall building performance and adversely affect the performance of other components.

To enhance the quality of the of workmanship, installation technique, the quality of the adjacent joints and transportation components of newly install facades.

## 3. Purpose and Scope

The field test to determine the resistance to water leakage of framing joints, glazing joints and seals, to remain permanent watertight.

The purpose of the test to enhance the joint is defined as a discontinuity between sections profile, materials, components or assemblies.

The test should be initial stage so that be able to define and exposed the systems and workmanship proposed/ designed.

## 4. Performance Requirement

The test is considered failed when there is an onset of leakage detected. The leakage is defined as being any appearance of uncontrolled water.



## 5. Designated Area

The designated areas should be representative to windows or doors that's typically constructed. The S.O. or client's representative should designate the area of the windows or doors to be tested and inspected.

## 6. Test Equipment's / Apparatus

The equipment comprises compressor (wind generating device) connected to 2 feeders, each 0.86-m long with 2 rows of nozzles. Air is blow through one row of nozzles while water is supplied to another row of nozzles through a hose, attached with a control valve and a pressure gauge to adjust the water flow.



## 7. Test Methodology

A steady spray test pressure about 240 Pa incorporating or to simulate wind - driven rain is applied on the installed window to wall joints. The water sprays directed at the joint and perpendicular to the face of the wall. The indoor side of the window and wall is checked for leakage within 10-minute test period.