



# Directional Wave Basin

Previously known as the Tsunami Wave Basin, was designed to understand the fundamental nature of tsunami inundation, tsunami-structure impact, harbor resonance and to improve the numerical tools for tsunami mitigation.

In addition to tsunami research, the facility is particularly suited for general testing of coastal infrastructures, nearshore processes research, wave hydrodynamics, floating structures and renewable energy devices.

The wave machine is a unique powerful snake-type system made of 29 boards with up to 2.1 m long stroke. It has been designed to generate short- and long-period multidirectional high quality waves.

## Wave Basin Dimensions

- Length: 48.8 m 160 ft
- Width: 26.5 m 87 ft
- Max depth: 1.37 m 4.5 ft
- Freeboard: 0.6 m 2.0 ft

## Wavemaker

- Type: Piston-type, Electric motor
- Waveboards: 29 boards, 2.0 m (6.6 ft) high
- Wave types: Regular, Irregular, Tsunami, Multidirectional, User defined
- Period range: 0.5 to 10 seconds
- Max. Wave: 0.75 m (2.5 ft) in 1.37 m (4.5 ft) depth
- Max. Stroke: 2.1 m (6.9 ft)
- Max. Velocity: 2.0 m/s (6.6 ft/s)



## Supporting infrastructure

- 7.5 T capacity bridge crane
- Instrumentation carriage, spans 26.5 m
- Unistrut installed in floor and sides to secure models
- Two access ramps, 14 ft width (4.2 m)
- Steady flow currents installed on project-by-project basis

