Name of organization Technology Centre for Offshore and Marine, Singapore (TCOMS)	**Year of information updating** 2022
Year established 2016	**Year of joining the ITTC** 2022
Address No. 12, Prince George's Park, #04-01, Singapore 118411	**Status in the ITTC** Member
Contact details (phone, fax, e-mail) (65) 6601 5053	**Website** www.tcoms.sg

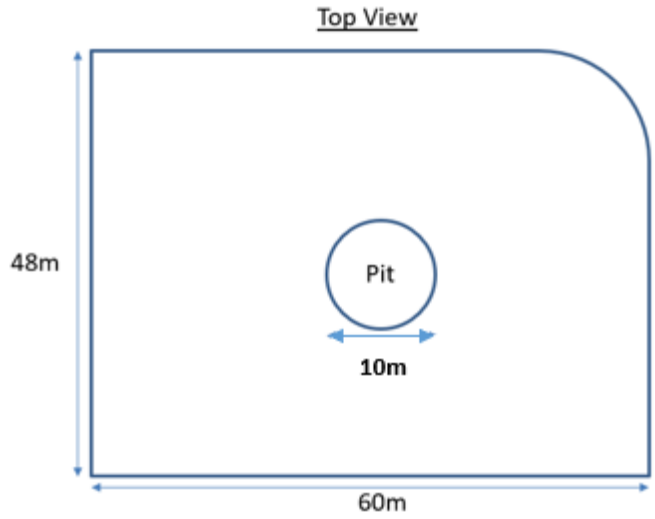
Type of facility Ocean Basin	**Year constructed/upgraded** 2021
Name of facility TCOMS Ocean Basin	**Location** (if different from the above address)

Main characteristics (dimensions of tank/basin/test section; for simulators: full mission, part task or desk top)

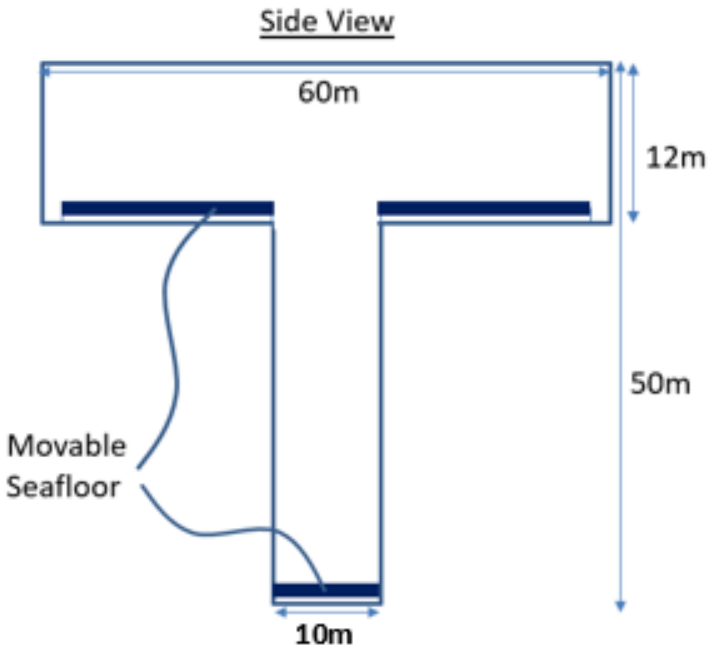
TCOMS's Ocean Basin dimension is 60m (L) X 48 (W) X 12m (D) with a Deep Pit dimension of approximately 10m diameter with a depth of 50m.

Drawings of facility

Top-view plan



Corss-section-view plan



Detailed characteristics (carriages, wave/current/wind generators, instrumentations, etc.)

The key features of the TCOMS ocean basin are as follows:

a. Wave Generation System
The wave generation system comprises of more than 180 flap-type paddles on two sides of the basin with capability to generate waves with wave period up to 4s and wave height up to 1.0m.

b. Instrumentation-cum-Towing Carriage
The Instrumentation-cum-Towing Carriage is designed to transverse at max 2m/s in the longitudinal direction (x-carriage) and max 4m/s in the transverse direction (y-carriage).

c. Current Generation System
The current generation system can produce six layers of inflow with maximum near surface current of 0.5m/s and has the capability to produce variable current profiles such as uniform and shear currents.

d. Movable Seafloor
The water depth of the basin can be varied from 0 to 12 m, as required based on the test set-up to cater to deep-water or shallow-water studies, by adjusting the elevation of the movable floor.

Applications (Tests performed)

Over the past two years, TCOMS has conducted multiple benchmarking and calibrations tests along with tests under research collaboration with industry and commercial tests. Some of these tests include,

a. Self-propulsion tests of a tug
b. PMM tests for tug
c. Open water tests for thrusters
d. Seakeeping and stationkeeping tests of a FPSO with truncated mooring system
e. Stationkeeping tests of a FPSO with cyberphysical mooring systems.
f. Soft-mooring towing tests of a hydroelastic containership.
g. Model testing of a Jackup with structurally equivalent leg structure.
h. Cyberphysical wind simulation on a Floating Offshore Wind Turbine.

Published description (Publications on this facility)