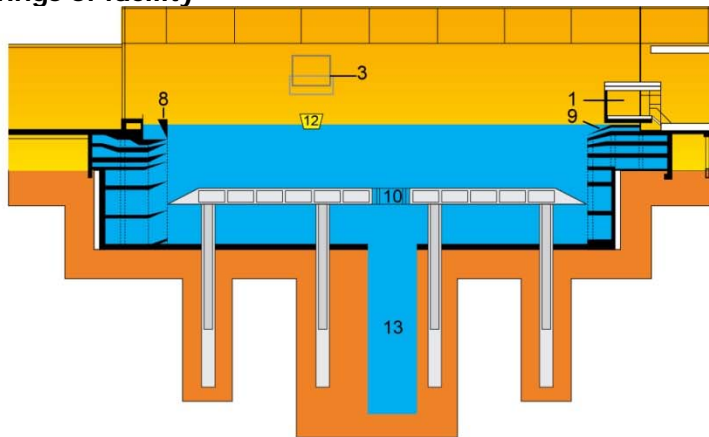


Name of organization MARIN	Year of information updating 2017
Year established 1932	Year of joining the ITTC 1932
Address Haagsteeg 2 6708 PM Wageningen The Netherlands	Status in the ITTC Advisory Council member
Contact details (phone, fax, e-mail) +31 317 493 911 +31 317 493 235 info@marin.nl	Website www.marin.nl www.marin.eu
Type of facility Wave and current basin	Year constructed/upgraded 2001 / 2016
Name of facility Offshore basin (OB)	Location (if different from the above address)

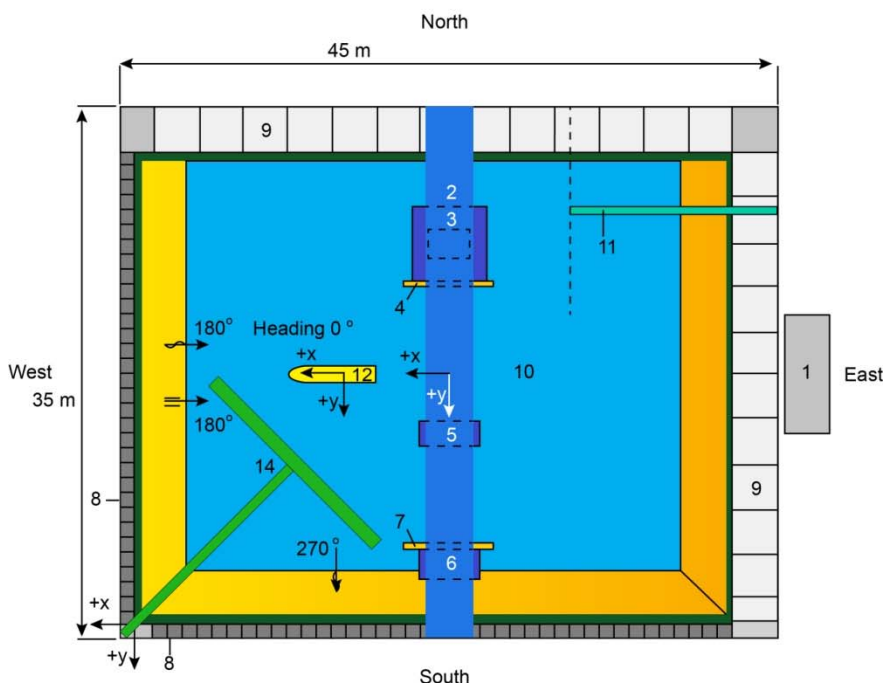
Main characteristics (dimensions of tank/basin/test section; for simulators: full mission, part task or desk top)

Length 45 m
 Width 35 m
 Water depth 0 – 10 m (movable floor)
 Water depth 0 – 30 m (pit)

Drawings of facility



- 1 Control room
- 2 Carriage, main frame
- 3 Carriage, sub carriage
- 4 Optical tracking device
- 5 Cable following carriage
- 6 Measuring carriage
- 7 Optical tracking device
- 8 Wave generator
- 9 Beaches
- 10 Moving floor
- 11 Crane
- 12 Ship model
- 13 Pit
- 14 Wind platform



Detailed characteristics (carriages, wave/current/wind generators, instrumentations, etc.)	
Description of carriage	Mainframe spanning the full width of the basin Subcarriage, cable tracking carriage, measuring carriage
Type of drive system and total power	Servo controlled, 4 * 45 kW
Maximum carriage speed	3.2 m/s main carriage 3.2 m/s sub carriage 0.24 rad/s turn table
Other capabilities	CPMC (computerized planar motion carriage)
Wave generator capability	Regular waves 0.8 m at a peak period of 3 s Irregular wave 0.4 m at a peak period of 3 s Wave direction 0 – 360 deg. Fitted with anti reflecting compensation (ARC)
Wave maker type:	Flap type, wetback, wave generator along south and west side of the basin. 200 flaps of 0.4 m wide, hinge depth 1.2 m
Beach type and length	East side: Circular beach, length 5.5 m North side: circular beach, length 6 m -
Wind generation	Wind generation by portable wind fans Wind fans are placed on a moveable wind platform of 24 m wide which can be positioned at different angle and heights in the basin Wind tunnel for high quality wind profile to be used for offshore wind testing Generic wind mill setup to be used for offshore wind testing
Other capabilities	Moveable floor of 45 * 36 m, water depth adjustable between 0 and -10 m. Pit, the basin is fitted with a pit with a diameter of 5 m. Total water depth is 30 m. Pit is fitted with a floor to adjust the water depth.
Current generation	Current can be simulated with all kinds of profiles (hurricane, deepwater etc.) Divided over the water depth of 10.5 m six layers of culverts are installed, each equipped with a pump.
Instrumentation	6 component force balances Wave height transducers Thrusters for dp systems Mooring load sensors Pressure sensors, acceleration sensors Current sensor (3D) Wind sensor (3D) Photo, video, underwater video
Model size range	0.3 - 10 m
Model tracking techniques	NDI camera (optical tracking) Underwater (optical tracking)

**Test performed
Offshore**

Test on moored or fixed objects to determine motions, mooring forces and loads due to wind, waves and current.
Current load test
Installation and sea transport of offshore structures
Wave energy devices
Drop tests for life boats
Dynamic positioning tests

Manoeuvring

Horizontal planar motion (CPMC) experiments
Rotating arm experiments

Other remarks

-

Published description (Publications on this facility)

B. Buchner, J.E.W. Wichers and J.J. de Wilde, 'Features of the state-of-the-art Deepwater Offshore Basin', OTC10814, 1999

<http://www.marin.nl/web/Facilities-Tools/Basins/Offshore-Basin.htm>