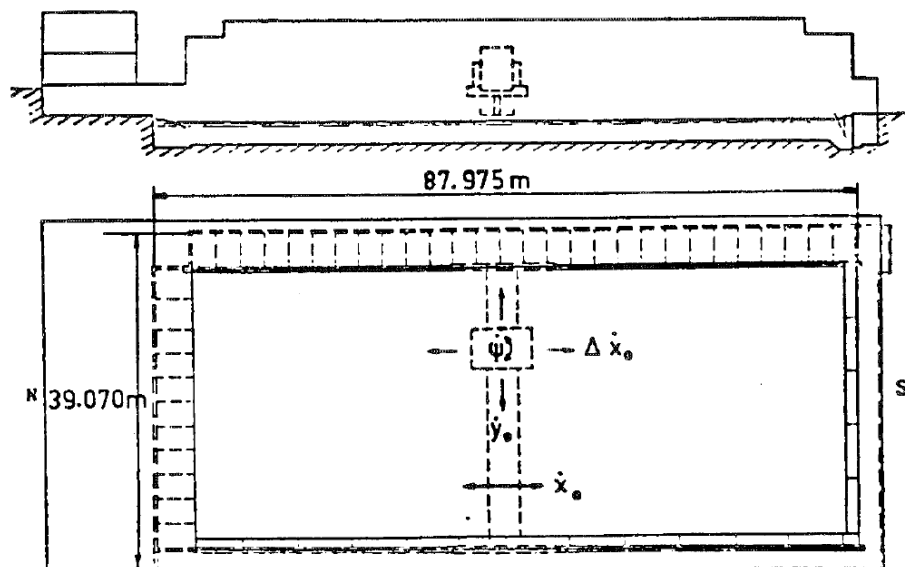


Name of organization SSPA Sweden AB		Year of information updating 2017
Year established 1940		Year of joining the ITTC 1948
Address Chalmers Tvärgata 10, Box 24001, SE-400 22 Gothenburg, Sweden		Status in the ITTC Advisory Council member
Contact details (phone, fax, e-mail) Phone: +46 37 772 90 00 Fax: +46 37 772 91 24 info@sspa.se		Website www.sspa.se
Type of facility Seakeeping and Manoeuvring Laboratory	Year constructed/upgraded 1979 / Constantly upgraded	
Name of facility SSPA Maritime Dynamics Laboratory	Location (if different from the above address)	
Main characteristics (dimensions of tank/basin/test section; for simulators: full mission, part task or desk top) L=88 m, B = 39m, T=3,5 m		

Drawings of facility



Top-view plan / Cross-section-view plan



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

Basin	Dimensions	88 × 39 × 3.5 m
	Water depth	0 - 3.2 m
	Deep-Water pit	5 × 9 m, depth 8 m
Waves	Wave length	0.2 < λ < inf. m
	Wave height	0 < H < 0.4 m
	Frequencies	0 < f < 3 Hz
Wind	Speed approx.	0 - 10 m/sec
Current	Towing up to 3.5 m/sec	
	Pump system up to 1.0 m/sec	
Carriage	Motion	Speed
	x'0	± 3.50 m/sec
	y'0	± 3.00 m/sec
	psi'0	± 30 °/sec

The Maritime Dynamics Laboratory (MDL) is a versatile facility for the research and development of seakeeping and manoeuvring behaviour of ships and other structures.

The MDL can also be used for assessing manoeuvring properties in waves. Model tests in oblique wave conditions play an important part when developing new hull forms for surface vessels. The angle of roll, degree of deck wetness, and course-keeping qualities of a vessel in bow, beam, and stern quartering seas are parameters that are difficult to predict accurately from theoretical calculations alone. Model tests in oblique seas, combined with simulations, have proved to be valuable tools in the study of ship projects.

The computer controlled, multi-motion carriage, spanning the whole basin, offers unique possibilities for conducting captive or free sailing manoeuvring tests. In captive manoeuvring tests, the facility can be used to perform both large-amplitude PMM tests and rotating arm tests, without having to change the set-up between the tests.

For free sailing tests, the width of the basin allows most manoeuvres to be performed with fairly large models, thus reducing the influence of scale effects. The MDL is also a very useful tool when determining whether a new or existing project fulfils the IMO regulations concerning turning ability and yaw checking. Course keeping abilities can also be studied.

For Deep-Water tests, typical anchored offshore structures, the pit can be used or the scaling of the model can be changed.

Published description (Publications on this facility)

www.sspa.se