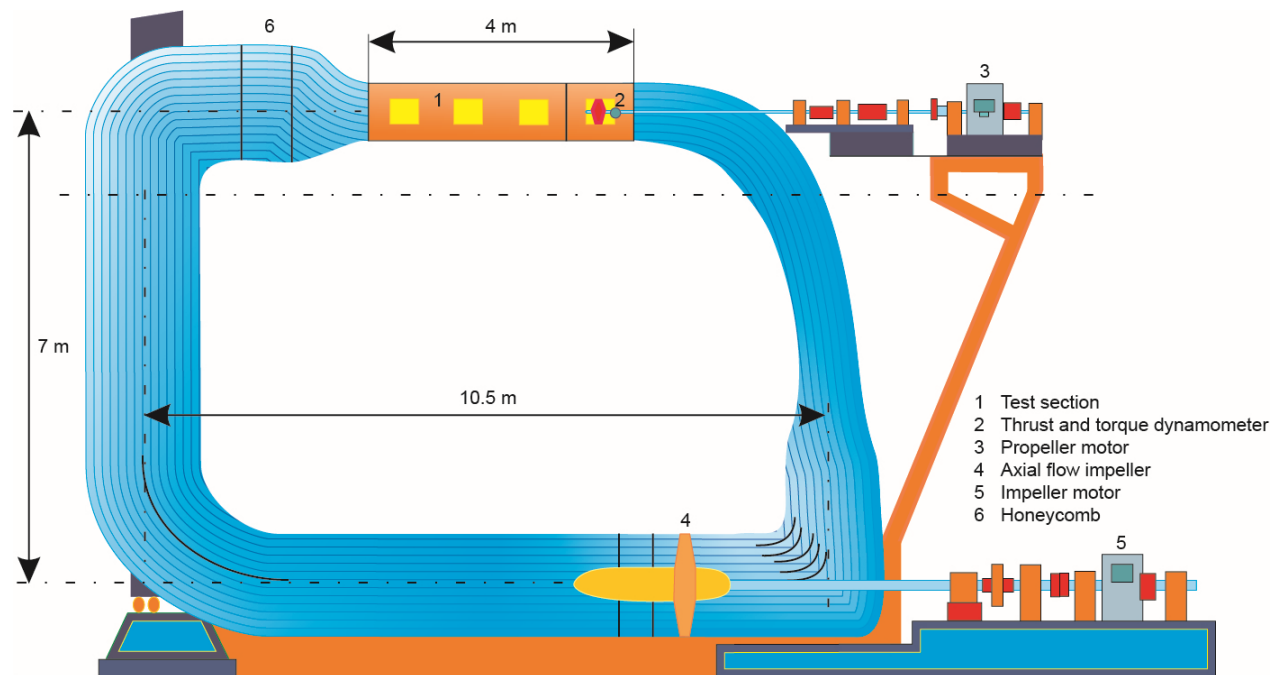



<b>Name of organization</b> MARIN	<b>Year of information updating</b> 2017
<b>Year established</b> 1932	<b>Year of joining the ITTC</b> 1932
<b>Address</b> Haagsteeg 2 6708 PM Wageningen The Netherlands	<b>Status in the ITTC</b> Advisory Council member
<b>Contact details</b> (phone, fax, e-mail) +31 317 493 911 +31 317 493 235 info@marin.nl	<b>Website</b> <a href="http://www.marin.nl">www.marin.nl</a> www.marin.eu
<b>Type of facility</b> Cavitation tunnel	<b>Year constructed/upgraded</b> 1941 / 1966
<b>Name of facility</b> Large cavitation tunnel	<b>Location</b> (if different from the above address)

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

**Drawings of facility**



<b>Detailed characteristics</b>	
<b>Test section</b>	Square 0.9 * 0.9 m with rounded corners Length 4.0 m
<b>Type of drive system and total power</b>	Impeller: 1480 mm fixed pitch, four bladed, 300 rpm Motor: DC, thyristor controlled, 220 kW, 1200 rpm
<b>Maximum velocity at test section</b>	10 m/s
<b>Test section pressure range</b>	10 – 180 kPa(absolute)
<b>Propeller drive</b>	Motor: DC, thyristor controlled, 184 kW, 3000 rpm
<b>Wake field simulation</b>	-

<p><b>Other capabilities</b></p>	<p>Waterjet performance and cavitation setup</p> 
<p><b>Instrumentation</b></p>	<p>Dynamometers:</p> <ul style="list-style-type: none"> <li>- Thrust and torque at propeller hub (max 2500 N, 125 Nm)</li> <li>- 6 component balances</li> <li>- 4 component for rudder and fins</li> </ul> <p>Pressure sensors PIV Stereo camera setup using Digital Image Correlation to measure deformation of propellers. High speed camera's Stroboscopes Atmospheric barometer</p>
<p><b>Propeller size range</b></p>	<p>150 – 350 mm</p>
<p><b>Applications</b> (Tests performed)</p>	<p>Cavitation observation tests, Cavitation inception</p> <p>Deformation of flexible propeller blades</p> <p>Performance of fins (for fin stabilizers)</p> <ul style="list-style-type: none"> <li>- Forces and torque</li> <li>- Cavitation inception</li> </ul> <p>Cavitation inception on waterjets Performance of waterjets</p>
<p><b>Published description</b> (Publications on this facility)</p> <p>Witte, J.H. and Esveldt, J., "Recent Improvements in the Large Cavitation Tunnel of the Netherlands Ship Model Basin", International Shipbuilding Progress, Vol. 13 No. 146, Oct. 1966 (NSMB Publ. No. 285)</p> <p>12th ITTC Proceedings, Rome, 1969</p> <p><a href="http://www.marin.nl/web/Facilities-Tools/Basins/Cavitation-Tunnel.htm">http://www.marin.nl/web/Facilities-Tools/Basins/Cavitation-Tunnel.htm</a>.</p>	