



## The Hamburg Ship Model Basin

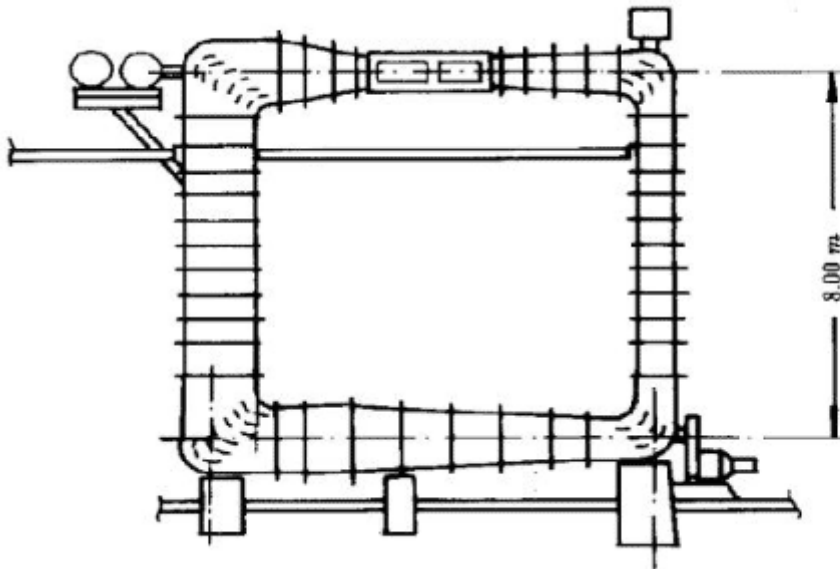
### Setting the Standard in Ship Optimisation

## CONVENTIONAL CAVITATION TUNNELS

You are here: [HSVA Home](#) | [Our Facilities](#) | [Cavitation Tunnels](#)

HSVA has a long experience in cavitation testing and offers three tunnels for cavitation tests. Propellers behind complete ship models are investigated in [HYKAT](#). In the two conventional cavitation tunnels ([medium tunnel](#), [large high speed cavitation tunnel](#)) the propellers are tested in simulated ship model wake fields behind wire mesh screens or behind partial appendage models.

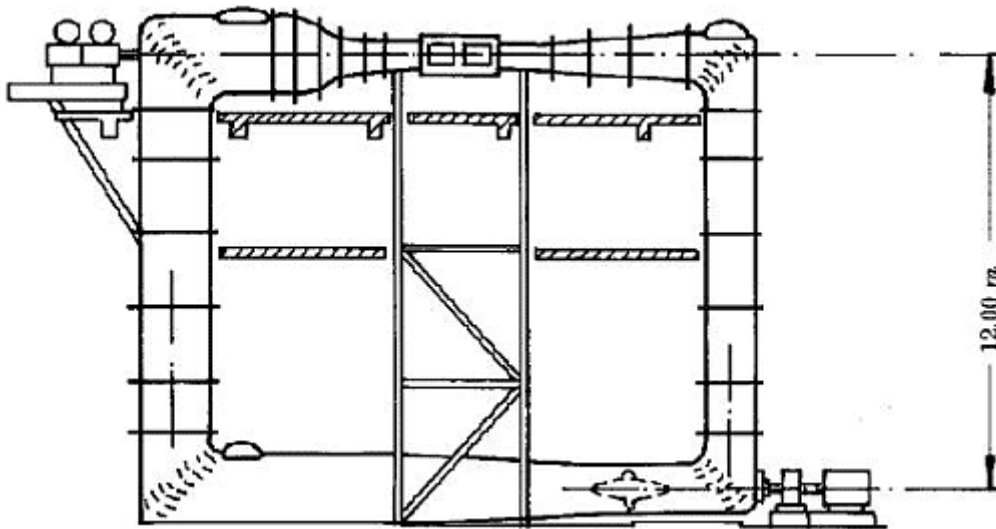
## Medium cavitation tunnel



Dimension of test section:	0.57 x 0.57 x 2.20 meters
Max. velocity	9.5 m/s
Max. revs. of model propeller	58 1/s
Range of propeller diameter	240-290 mm
Description of facility:	Produced by K & R, K22 type
Type of drive system:	4 bladed axial flow impeller, 4-quadrant converter control
Total motor power:	Impeller: 60 kW at 1500 1/min Propeller: 14.3 kW at 3500 1/min
Max. & min. pressures:	1.5 bar absolut down - vapour pressure
Instrumentation:	Laser Doppler Velocimetry
Types and locations of torque and thrust dynam.:	Mechanical, upstream, horizontal shaft, 14.3 kW at 3500 1/min
Tests performed:	Cavitation tests in uniform flow as well as in simulated wa>

-----, propeller noise. </tbody>ke field. Measurement of hull pressures--  
-905727288393097998306027910 Content-Disposition: form-data; name="btn\_save" Block speichern

## Large high speed cavitation tunnel



Dimension of test section:	0.75 x 2.25 meters, circular
Max. velocity	19.5 m/s
Max. revs. of model propeller	75 1/s
Range of propeller diameter	1. 300-400 mm 2. 280-320 mm
Description of facility:	Produced by K & R, K16 type
Type of drive system:	4 bladed axial flow impeller, Leonard-System
Total motor power:	Impeller: 350 kW at 375 1/min Propeller: 130 kW at 4500 1/min
Max. & min. pressures:	2.5 bar absolut down - vapour pressure
Types and locations of torque and thrust dynam.:	1. Mechanical, upstream, horizontal shaft, 130 kW at 4500 1/min 2. Strain gauges, downstream, inclined shaft up to 12 degree
Tests performed:	Cavitation tests in uniform flow as well as in simulated wake field. CR and tandem propeller testing, high Reynolds Number testing, partial rudder model testing.

