

## Hexamove (TUDelft)

### *Towing Tank Tests*

The Hexmove, or HexaPod is an electric operated model positioning device for model positioning and oscillation in six degrees of freedom. The Hexamove is used to position and oscillate models under the carriage in the towing tank while advancing with forward speed.

Reach translations  $x=\pm 200$  mm;  $y=\pm 235$  mm  $Z=\pm 175$  mm

Reach rotations x-axis  $\pm 27$  deg; y-axis  $\pm 25$  deg; z-axis  $\pm 30$  deg

Motion combinations: Arbitrary, limited by maximum stroke of the individual electric servos

Dynamic reach: Depending on workload (maximum 200 kg)

Manufacturer: Symmetry; Drive system: 6 software controlled electric servos; Motion control: Software, using input files; Motions: Sinusoidal, pulse, predefined path, Engine power: 11 kW

Instrumentation: Absolute measurement of cylinder length

Tests performed: Control of steady trim and sinkage in ship resistance experiments, Forced oscillation tests in six degrees of freedom of segmented models, Sailing yacht maneuvering (tacking motion), Model position control in hull pressure experiments

