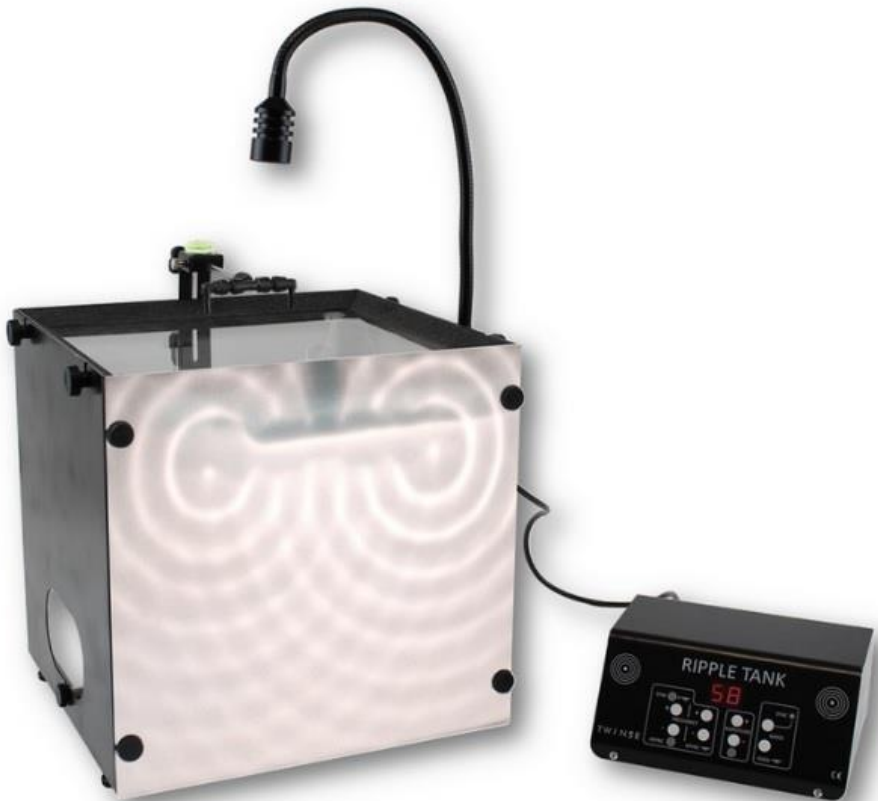


# INSTRUCTIONS FOR USE

## Ripple tank EASY KIT

DM200023



## **Composition**

- 1 ripple tank
- 1 ripple generator with adjustable frequency with screen
- 1 LED strobe 3W on hose
- 3 waves generation modules (simple circular wave, twin circular waves and straight wave)
- 7 different immersion bodies: prism, biconcave lens, biconvex lens, bodies for single or double slits

## **Description**

The purpose of the ripple tank EASY KIT is to easily visualize the wave phenomena. It is possible to explain the incidence of the frequency on the celerity of the wave on the water surface.

The distance between two circles of the wave is equivalent to the wave length  $\lambda$ . The formula is:  $\lambda = c T$  où  $f = 1/T$

The ripple tank is composed of a strobe linked to an air pulse wave generator.

The handling and the storage of the ripple tank is easy thanks to its magnetic stroboscope and its removable structure.

## Characteristics

### A. Tank:

Removable structure, delivered in kit to assembly by the user thanks to the assembly instructions included.

Transportation handles.

Integrated emptying pipe.

Dimensions: Tank 335 x 305 x 320 mm  
White screen 335 x 320 mm  
Glass operating space 285 x 255 mm

### B. Strobe:

LED lighting 3 W.

Maximum frequency = 60 HZ.

Magnetic rod mounted on hose.

Dimensions:  $\varnothing 34$  mm

### C. Wave generator:

Air flow adjusted with amplitude function.

Frequency adjusted from 1 to 60Hz by 1Hz.

Frequency starting from 30Hz.

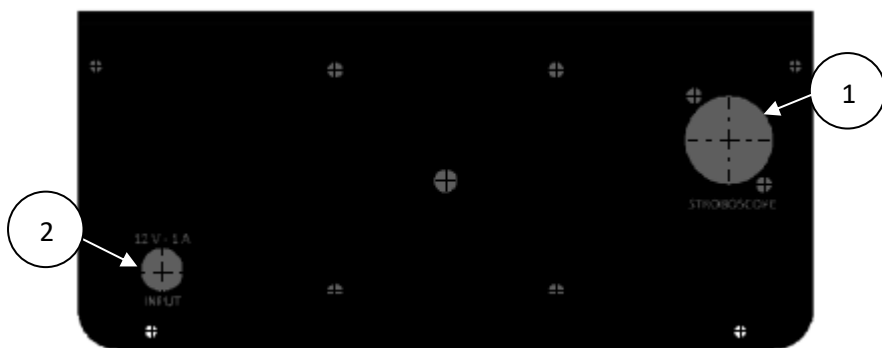
2 operation mode: synchronous (LED lighted) or asynchronous.

Power supply: 12 V / 1 A direct current (transformer included).

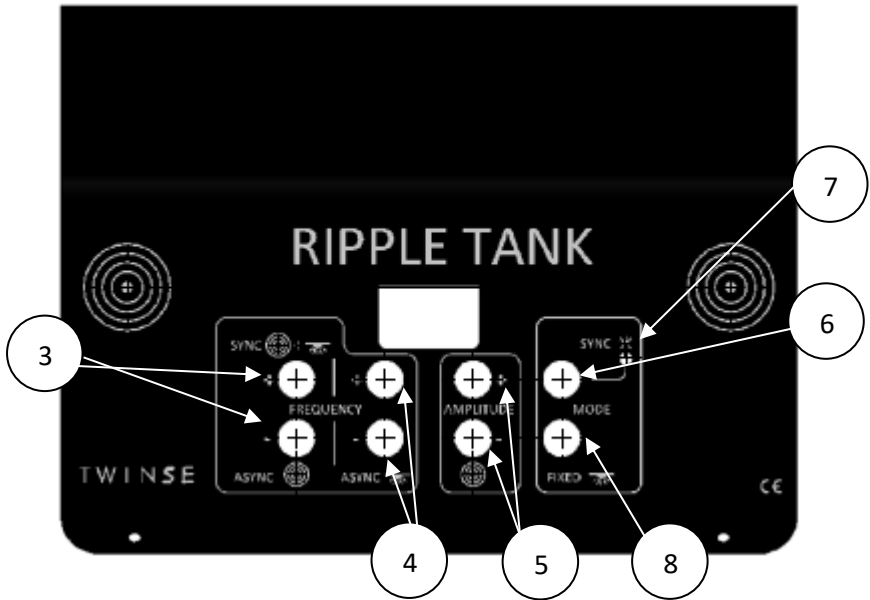
Dimensions: 220 x 150 x 100 mm

Air hose for generation module connecting included

Back-up face:

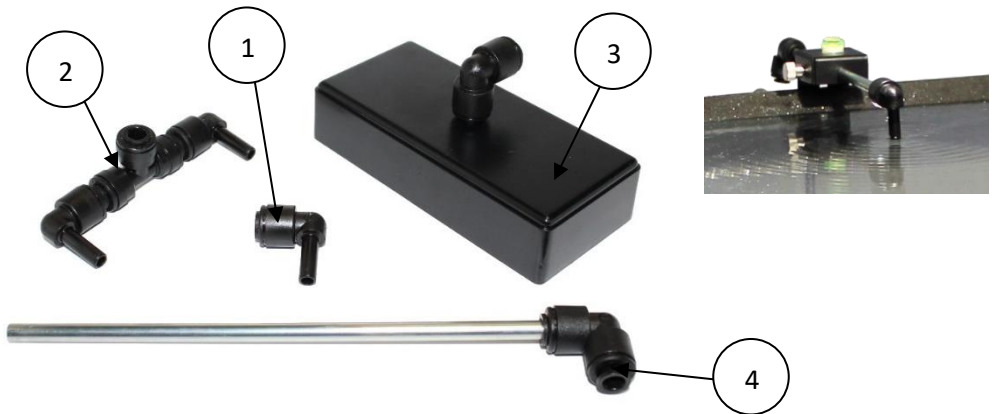


1. XLR socket for strobe
2. Socket for connecting plug-in power supply



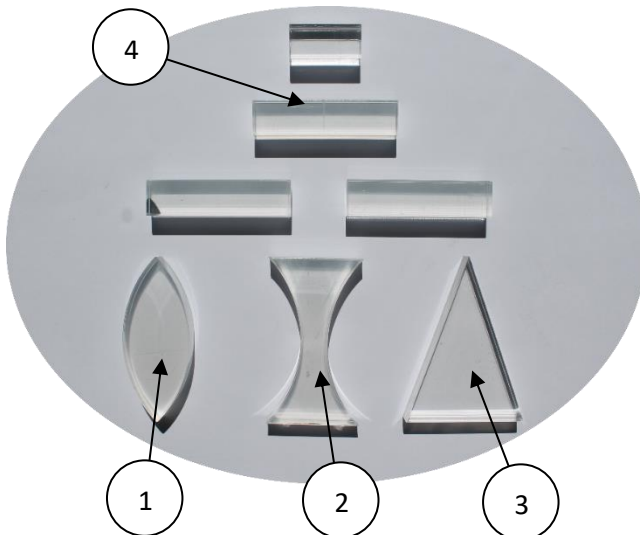
3. Knobs for adjusting frequency for synchronous or asynchronous modes and strobe frequency for synchronous mode.
4. Knobs for adjusting strobe frequency for asynchronous mode.
5. Knobs for adjusting wave amplitude.
6. Knobs for selecting synchronous and asynchronous modes.
7. Indicator light for synchronous (switched on) and asynchronous (switched off).
8. Switch for continuous strobe illumination.

## D. Wave generation modules



1. Simple circular wave module
2. Twin circular waves module
3. Straight wave module
4. Connecting pipe

## E. Immersion bodies



1. Convex lens
2. Concave lens
3. Isosceles prism
4. Immersion bodies with different lengths to set up a single or a double slits.

## **Start-up**

---

- Remove the ripple tank from its card box and put it on a plane, stable and horizontal surface.
- Adjust the horizontality with the adjusting feet and the bubble level.
- Fix the LED strobe on the side of the tank thanks to the magnetic support.
- Connect the strobe to the control unit with the XLR connection.
- Fill 2/3 of the tank with distilled water.
- Connect the 12V power supply to the control unit with the jack plug.
- Connect the air hose beside the control unit.
- Place the connecting pipe for generation module on the tank.

## **Use**

---

- After starting up, synchronous mode lights up by default.
- Adjust air generator with knob n°5.
- Select synchronous or asynchronous mode with knob n°6.

### With synchronous mode:

Adjust the frequency of the wave and strobe simultaneously with knobs n°3.

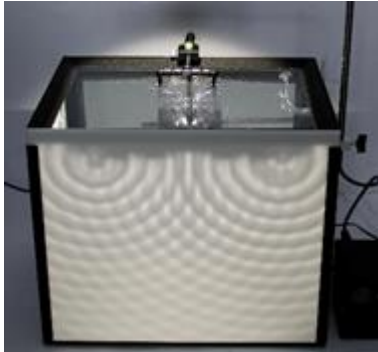
### With asynchronous mode:

Adjust the frequency of the wave with knobs n°3, and the frequency of strobe with knobs n°4.

Utilization with single circular wave:



Utilization with twin circular waves:



Utilization with straight wave:



Place the different immersion bodies in the tank for the different experiments:



## Cleaning / Storage

- After its utilization, empty the tank thanks to the lateral hose.
- Dry correctly the glass to avoid scale deposition.
- Put the tank back in its card box and storage it out of dust and humidity.

