# Boatwasher

## The most profitable antifouling:

**BOATWASHER** provides a comprehensive concept for mechanical cleaning of ship hulls, replacing toxic antifouling paints.

This alternative method to antifouling painting also offers the following advantages:

- **Effective**: cleans algae and barnacles, from the hull, propellers and shovel of rudder. It is suitable for boats, both sailing and motor, up to 6m beam and with no length limit. The hull is brushed clean while the boat is in the water.

- **Fast**: It takes about 20 minutes to wash a 24 feet boat, and about 30 minutes a 40 feet.

- **Cheap**: the cost for the boat owner is approximately 50€ to clean a 24-feet boat and about 60€ a 40-feet. There are necessary between 3 and 4 washes a year to keep the boat in perfect condition.

- **Environmentally friendly**: it doesn't use any chemicals. You will never again need to apply toxic antifouling to the hull. Thus, you will avoid the pollution produced by biocides used in its formulation.

## How does it work

The system looks like a car wash but submerged in the water. A series of articulated brushes, spinning at low

speed, clean the hull while a winch moves the boat forward and backward.

As can be seen in the photo above, the boat is introduced into a PVC basin where the cleaning waste is deposited.

From an economic point of view, it is not only profitable for the shipowner, also for the owner of the washing station.

The boat owner saves the money of taking the boat out of the water, cleaning the hull, apply antifouling and re-launching. Instead, with boatwasher you just have to go 3 to 4 times a year to the washing station, that is, about 2 hours a year at a reduced cost.

The economic study for the owner of the washing station is in the attached tables.

## Boatwasher models fit most boats

| Model | Max. beam (cm) | Max. depth(cm) | Max. length (cm) |
|---|---|---|---|
| Swede 400 | 400 | 200 | Unlimited |
| Swede 500 | 500 | 220 | Unlimited |
| Swede 600 | 600 | 240 | Unlimited |

The **maximum dimensions depend** on the **type** of **boat, hull, rudder, keel, axis,** etc.

**The** vessel's **length** is **not** a **constraint** as it can be towed along its length above the brushes. The maximum length that can be washed is only limited by the **location** of the **machine** and the **distance** from the brushes to the winch dragging the boat.

**Quick** and easy to **handle**

The steps to follow for cleaning the boat are:

1. Place the boat inside the washing machine.

2. Tie the bow to the boatwasher's winch.

3. Turn off the boat's engine.

4. Start the machine.

5. Allow the brushes to clean the hull and, once finished, take the boat out of the washing machine.

6. Start the boat's engine once outside the machine.

The **time** it takes to **wash** the boat will depend mainly on its **length and the hull's waste.**

| **Boat Length** | **Wash time (minutes)** |
|---|---|
| 16 pies / 5m | 5 – 10 |
| 22 pies / 7m | 7 – 14 |
| 30 pies / 9m | 9 – 18 |
| 35 pies / 11m | 11 – 22 |
| 40 pies / 14m | 14 – 28 |
| 50 pies / 15m | 15 – 30 |

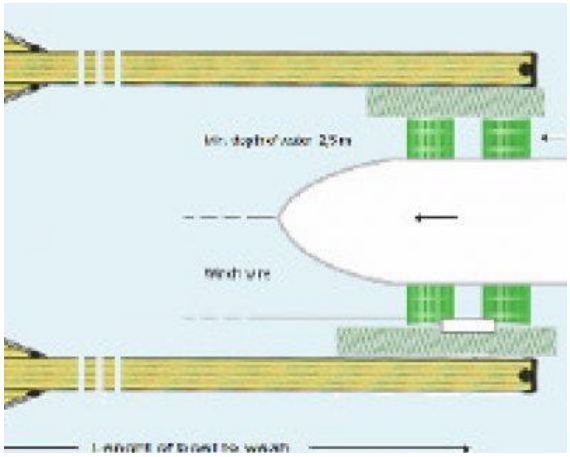
In the **floating models**, it's possible to clean the outboard motor shaft and the transom with a **brush** or **pressurized water.**

**Features**:

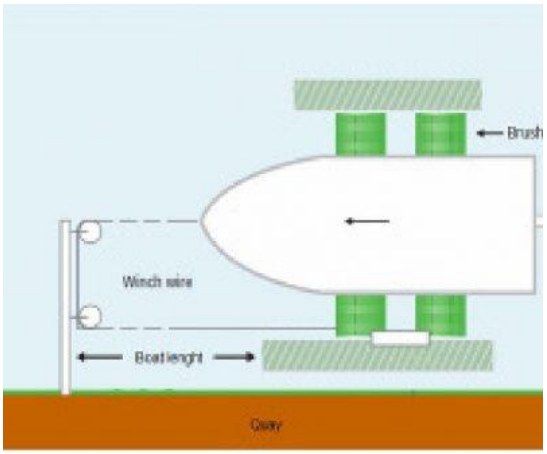
• Easy to install in complicated locations and narrow ports.

• Double row of brushes provide speed, stability and easier management.

Between two y-bones/fingers:



On a pier:

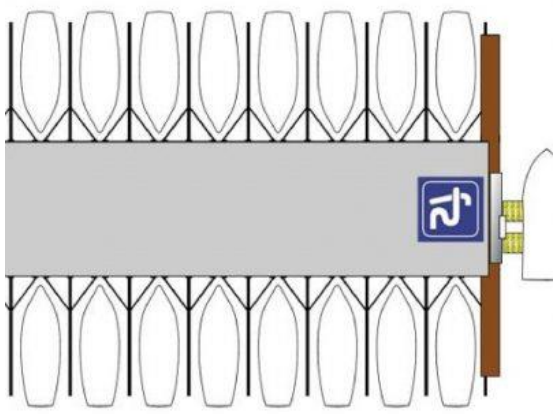



Two mounting **alternatives**:

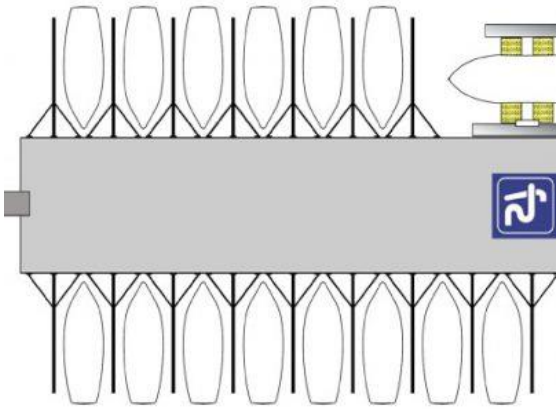
• Floats: free floating machine moored to a dock or pier.

• Fixed: attached to a dock or floating dock.

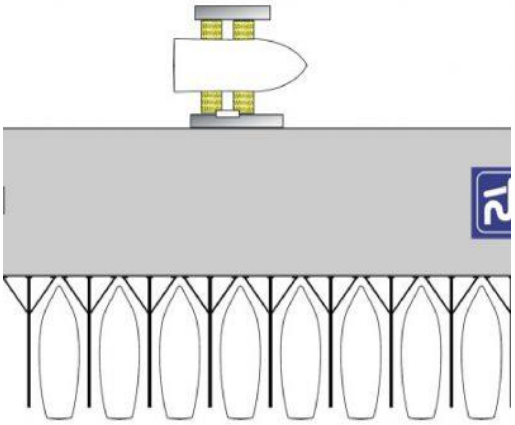
Located on the edge of a pier:

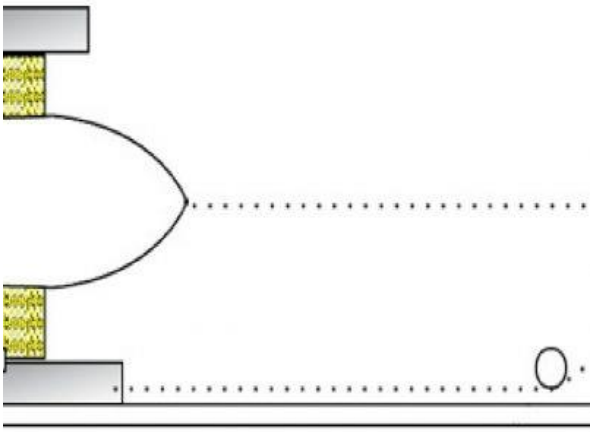


Located along a pier or wharf:



Independently located on a pier or wharf:





**Mobile** or **free floating** with a **winch** (only for floating models):

Basin for **waste collection**:

Waste from the hull falls into a compartment at the base of the basin. This waste is regularly removed and recycled.

**There are two waste removal models:**

• **WGB90T**: **basin** for waste collection, including a pump and a 1m³ tank.

• **WGB90F: basin** for waste collection, including a **pump** and water f**ilter**.

**Brushes:**

The machine has two types of brushes:

• **Horizontal:** These clean the hull and part of the side of the boat. The angle of the brushes can be adapted to the shape of the hull.

• **Vertical**: These clean the keel, rudder, propeller and lower parts of the axes / propellers. The rudders at the stern

and outboard shafts can be cleaned thanks to to the vertical brushes located outside of the water.

**Pressure:**

The brushes float on the water and the pressure they make against the hull can be adjusted by a pump and a winch.

**Hydraulic:**

The brushes are driven by hydraulic engines.

Two rows of brushes. Fast, stable and easy to handle

**Installation and start up in less than one day:**

Its total weight is less than 1800 kg. Its installation is simple, only an electric connection being necessary.

**Power requirements of the electric engine:**

- **Three phases**
- **4,0kW**
- **400V**
- **16A.**

**Easy maintenance**

Maintenance will be performed every one or two years, depending on the use, and will consist of:

1. Taking the machine out of the water and washing with water at medium or high pressure

2. Change the oil of hydraulic engine.

3. Revision and, if necessary, replacement of hydraulic hoses.