

18.000/18.001

Secchi Disc

Manual

**KC** Denmark A/S

Research Equipment  
Limnology • Oceanography • Hydrobiology

## Secchi Disc

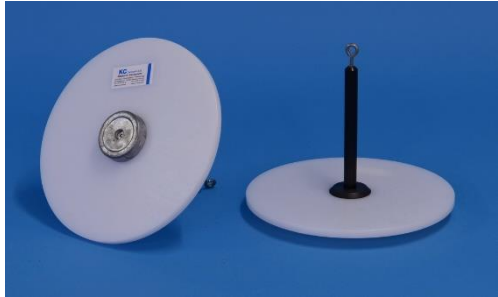
### What is the Secchi disc?

The Secchi disc is a low-tech device used to measure water clarity. It is a weighted, 25 or 30 cm disc, usually painted white or with alternating black and white quadrants. It is lowered into the water until it can no longer be seen from directly above. The weight of the disc is important to ensure the disc hangs straight when there is a current or tidal flow.

Measuring the visible water depth is also known as SDT (Secchi Disc Transparency) and it is a quick, simple and accurate method for determining lake water quality. Transparency is a measurement of how deep into a lake the sunlight can penetrate. Factors that interfere with light penetration are algae, zooplankton, watercolor and silt. Since algae is usually the most abundant item, by measuring transparency one also is measuring the algae population. Lake water quality can be defined as the number of algae that a lake supports.

It is recommended using optional devices for suppression of reflections, i.e., polarized glasses or a water scope (hydroscope) for the observer. The scope or the glasses allows the monitor to see more deeply and clearly into the water by reducing glare and cutting down on wave disturbances. Using a scope can maximize the depth of SDT reading and minimize the effects of varying cloud covers, wave movements and wind velocities.

The Secchi disc takes its name from an Italian astronomer and astrophysicist, Father Pietro Angelo Secchi (1818-1878), a scientific adviser to the Pope of the day. Father Secchi tested a new transparency device at the request of the Papal Navy. The instrument, now known as the Secchi disc, was first lowered from the papal steam yacht in the Mediterranean in 1865.

Item	Preparation	
1	<p>The Secchi disc is available in two sizes:</p> <p>Order no. 18.000: Ø25 cm, weight 0,8 kg Order no. 18.001: Ø30 cm, weight 2,7 kg</p> <p>The disc may be delivered in a disassembled state, if so, it can be assembled as shown.</p>	
2	Attach a measuring tape/rope of non-elastic material.	
3	Always anchor your boat. If the boat moves while taking the reading, and the disc does not hang straight, the reading will not be accurate.	
4	Lower the Secchi disc into the water on the shady side of the boat. This will also insure the deepest possible reading. The shade reduces glare and can improve the readings up to 1 m.	

5	Keep lowering the disc slowly until it disappears. Note the depth on the cord.	
6	Slowly pull the disc up until you see it again. Note the depth on the cord.	
7	Average the 2 depths to the nearest mark on the cord.	
8	Record the average depth on the Secchi data sheet along with the date and time of the reading.	

### Storing and Maintenance

All parts of the item can be rinsed using salt water or fresh water. Before storing, we recommend a thoroughly cleaning with fresh water.

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